MAIL TO:

STATE OF UTAH
DIVISION OF PURCHASING
3150 STATE OFFICE BUILDING, STATE CAPITOL
P.O. BOX 141061
SALT LAKE CITY, UTAH 84114-1061
TELEPHONE (801) 538-3026
http://www.purchasing.state.ut.us

Request for Proposal

Solicitation Number: **NO3007**

Due Date: **08/13/02 at 3:00 P.M.**

Date Sent: July 19, 2002

Agency Contract

Goods and services to be purchased: ***STATEMENT OF INTEREST***

AGENCY CONTRACT FOR RECLAMATION AND DESIGN FOR THE SOUTHPORT AND MAMMOTH ABANDONED MINE PROJECTS

Please complete

Company Name			Federal Tax Identification Number
Ordering Address	City	State	Zip Code
Remittance Address (if different from ordering address)	City	State	Zip Code
Type ☐ Corporation ☐ Partnership ☐ Proprietorship ☐ Government	Company Contact Person		
Telephone Number (include area code)	Fax Number (include area code)		
Company's Internet Web Address	Email Address		
Discount Terms (for bid purposes, bid discounts less than 30 days will not be considered)	Days Required for Delivery After Receipt of Order (see attached for any required minimums)		

The following documents are included in this solicitation: Solicitation forms, instructions and general provisions, and specifications. Please review all documents carefully before completing.

The undersigned certifies that the goods or services offered are produced, mined, grown, manufactured, or performed in Utah. Yes_____ No_____. If no, enter where produced, etc._____

Offeror's Authorized Representative's Signature	Date
Type or Print Name	Position or Title

STATE OF UTAH
DIVISION OF PURCHASING

Request for Proposal

Solicitation Number: NO3007

Due Date: 08/13/02

Vendor Name:

STATEMENT OF INTEREST

TO PROVIDE QUALIFIED PROFESSIONAL ENGINEERING SERVICES TO THE UTAH DIVISION OF OIL, GAS AND MINING, ABANDONED MINE RECLAMATION PROGRAM. THE WORK REQUIRES INVENTORY AND EVALUATION OF TWO ABANDONED MINE PROJECT AREAS WITH RESPECT TO PUBLIC SAFETY HAZARDS AND DESIGN OF RECLAMATION TO MITIGATE HAZARDS FOR THE SOUTHPORT AND MAMOTH ABANDONED MINE.

QUESTIONS ON SPECIFICATIONS CALL PAUL WISNIEWSKI AT (801) 538-5318.

QUESTIONS ON PURCHASING PROCESS (NOT RELATED TO SPECIFICATIONS) CALL NANCY ORTON AT (801) 538-3148.
RX: 560 32000000002

REQUEST FOR PROPOSAL - INSTRUCTIONS AND GENERAL PROVISIONS

1. **PROPOSAL PREPARATION:** (a) All prices and notations must be in ink or typewritten. (b) Price each item separately. Unit price shall be shown and a total price shall be entered for each item bid. (c) Unit price will govern, if there is an error in the extension. (d) Delivery of services as proposed is critical and must be adhered to. (e) Incomplete proposals may be rejected. (f) This proposal may not be withdrawn for a period of 60 days from the due date. (g) Where applicable, all proposals must include complete manufacturer's descriptive literature. (h) By signing the proposal the offeror certifies that all of the information provided is accurate, that they are willing and able to furnish the item(s) specified, and that prices offered are correct.

2. **SUBMITTING THE PROPOSAL:** (a) The proposal must be signed in ink, sealed, and if mailed, mailed in a properly-addressed envelope to the DIVISION OF PURCHASING, 3150 State Office Building, Capitol Hill, Salt Lake City, UT 84114-1061. **The "Solicitation Number" and "Due Date" must appear on the outside of the envelope.** (b) Proposals, modifications, or corrections received after the closing time on the "Due Date" will be considered late and handled in accordance with the Utah Procurement Rules, section 3-209. (c) **Your proposal will be considered only if it is submitted on the forms provided by the state. Facsimile transmission of proposals to DIVISION will not be considered.** (d) All prices quoted must be both F.O.B. Origin per paragraph 1.(c) and F.O.B. Destination. Additional charges including but not limited to delivery, drayage, express, parcel post, packing, cartage, insurance, license fees, permits, costs of bonds, or for any other purpose must be included in the proposal for consideration and approval by the Division of Purchasing & General Services (DIVISION). Upon award of the contract, the shipping terms will be F.O.B. Destination, Freight Prepaid with freight charges to be added to the invoice unless otherwise specified by the DIVISION. No charge for delivery, drayage, express, parcel post, packing, cartage, insurance, license fees, permits, costs of bonds, or for any other purpose will be paid by the state unless specifically included in the proposal and accepted by DIVISION. (e) By signing the proposal the offeror certifies that all of the information provided is accurate and that he/she offers to furnish materials/services for purchase in strict accordance with he requirements of this proposal including all terms and conditions.

3. **BONDS:** The state has the right to require a bid or proposal bond, payment bond and/or a faithful performance bond from the offeror in an amount not to exceed the amount of the contract.

4. **PROPRIETARY INFORMATION:** Suppliers are required to mark any specific information contained in their bid which is not to be disclosed to the public or used for purposes other than the evaluation of the bid. Each request for non-disclosure must be accompanied by a specific justification explaining why the information is to be protected. Pricing and service elements of any proposal will not be considered proprietary. All material becomes the property of the state and may be returned only at the state's option. Proposals submitted may be reviewed and evaluated by any persons at the discretion of the state.

5. **BEST AND FINAL OFFERS:** Discussions may be conducted with offerors who submit proposals determined to be reasonably susceptible of being selected for award for the purpose of assuring full understanding of, and responsiveness to, solicitation requirements. Prior to award, these offerors may be asked to submit best and final offers. In conducting discussions, there shall be no disclosure of any information derived from proposals submitted by a competing offeror.

6. **SAMPLES:** Samples, brochures, etc., when required, must be furnished free of expense to the state and if not destroyed by tests may, upon request made at the time the sample is furnished, be returned at the offeror's expense.

7. **DIVISION APPROVAL:** Contracts written with the State of Utah, as a result of this proposal, will not be legally binding without the written approval of the Director of the DIVISION.

8. **AWARD OF CONTRACT:** (a) The contract will be awarded with reasonable promptness, by written notice, to the lowest responsible offeror whose proposal is determined to be the most advantageous to the state, taking into consideration price and evaluation factors set forth in the RFP. No other factors or criteria will be used in the evaluation. The contract file shall contain the basis on which the award is made. Refer to Utah Code Annotated 65-56-21. (b) The DIVISION can reject any and all proposals. And it can waive any informality, or technicality in any proposal received, if the DIVISION believes it would serve the best interests of the state. (c) Before, or after, the award of a contract the DIVISION has the right to inspect the offeror's premises and all business records to determine the offeror's ability to meet contract requirements. (d) The DIVISION will open proposals publicly, identifying only the names of the offerors. Proposals and modifications shall be time stamped upon receipt and held in a secure place until the due date. After the due date, a **register** of proposals shall be established. The **register** shall be open to public inspection, but the proposals will be seen only by authorized DIVISION staff and those selected by DIVISION to evaluate the proposals. The proposal(s) of the successful offeror(s) shall be open for public inspection for 90 days after the award of the contract(s). (e) Utah has a reciprocal preference law which will be applied against bidders bidding products or services produced in states which discriminate against Utah products. For details see Section 63-56 20.5 -20.6, Utah Code Annotated.

9. **ANTI-DISCRIMINATION ACT:** The offeror agrees to abide by the provisions of the Utah Anti-discrimination Act, Title 34 Chapter 35, U.C.A. 1953, as amended, and Title VI and Title VII of the Civil Rights Act of 1964 (42 USC 2000e), which prohibit discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age, and Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990, which prohibits discrimination on the basis of disabilities. Also offeror agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the workplace. Vendor must include this provision in every subcontract or purchase order relating to purchases by the State of Utah to insure that the subcontractors and vendors are bound by this provision.

10. **WARRANTY:** The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah applies to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgement to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the

contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.

11. **DEBARMENT:** The CONTRACTOR certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the CONTRACTOR cannot certify this statement, attach a written explanation for review by the STATE.

12. **GOVERNING LAWS AND REGULATIONS:** All State purchases are subject to the Utah Procurement Code, Title 63, Chapter 56 Utah Code Annotated 1953, as amended, and the Procurement Rules as adopted by the Utah State Procurement Policy Board (Utah Administrative Code Section R33). These are available on the Internet at www.purchasing.state.ut.us.

REQUEST FOR STATEMENTS OF INTEREST – BID NUMBER NO3007

For
Abandoned Mine Reclamation Program Reclamation Engineering and Design

2002 Projects - Southport and Mammoth

PURPOSE

The purpose of this Request for Statements of Interest (REQUEST) is to procure qualified professional engineering services for the Utah Division of Oil, Gas and Mining, Abandoned Mine Reclamation Program, hereafter referred to as OWNER. The services include inventory of abandoned mine project areas, evaluation of the associated public safety hazards, and reclamation designs to mitigate those hazards. A firm submitting an SOI will hereafter be referred to as OFFEROR.

This REQUEST solicits engineering services for two separate PROJECTS: Southport Project and Mammoth Project. OFFEROR may choose to be considered for either or both of the PROJECTS. OFFEROR must specify which PROJECT(S) they wish to be evaluated for. OFFEROR should request consideration for **only** the PROJECT(S) they have the capacity to complete before the deadline. Deadline for all deliverables for the PROJECT(S) is October 1, 2003.

All work shall be performed by or under the direct supervision of a professional engineer (PE) registered in the State of Utah with a PE license in civil or mining engineering (see section C.8).

OWNER will evaluate and rank each Statement of Interest (SOI) based on the evaluation criteria outlined in this REQUEST. OWNER will negotiate a contract with OFFEROR who submits the highest-ranking SOI. The contract is subject to approval of the Utah Division of Purchasing and the Utah Division of Finance, and is not binding on OWNER or the successful OFFEROR until such approval is obtained. Upon contract approval the successful OFFEROR will be referred to as CONSULTANT.

For OFFERORs who have previously performed work on an OWNER project, a performance rating of ten points or more is required in order to be considered for subsequent projects. Beginning with contracts awarded in 1999, all CONSULTANTs are evaluated using the Consultant Performance Rating Form (see Attachment B.5 and APPENDIX A).

This work is funded through the U.S. Office of Surface Mining and the state of Utah. Award of contract and authorization to perform the work are subject to the availability of funds.

ADMINISTRATIVE GUIDANCE

The information provided here is designed to provide OFFERORs with sufficient information to prepare a proposal that meets the minimum requirements necessary to properly respond to this REQUEST. It is not intended to limit the content or exclude any relevant or essential data from OFFEROR's SOI. OFFERORs are encouraged to improve and/or update OWNER's suggested methods for inventory and reclamation design.

RESPONSE DATE

Four (4) copies of the SOI must be received by the **Utah Division of Purchasing** prior to the closing date and time specified. Any SOI en route, either in the mail or in other locations in the State Office Building, will not be considered timely. SOIs received after the deadline will be late and ineligible for consideration. SOIs must be delivered in envelopes with the Bid Number clearly written on the outside. The address for submissions is:

Division of Purchasing
Room 3150 State Office Building
Capitol Hill
Salt Lake City, Utah 84114
Bid Number NO3007, August 13, 2002 at 3:00 PM

SOIs will be received until 3:00 p.m. on **Tuesday, August 13, 2002** at the **Division of Purchasing only.** ***Do not***

deliver SOIs to OWNER.

ISSUING OFFICE AND REFERENCE NUMBER

The Utah Division of Purchasing is the issuing office for this REQUEST and all subsequent addenda relating to it. The reference number for this REQUEST must be referred to on all SOIs, correspondence, and documentation relating to this REQUEST.

The reference number for this REQUEST is Bid Number NO3007.

SOI PREPARATION INSTRUCTIONS

SOIs should contain the information required and be organized as described below. SOIs in nonstandard formats will not be evaluated. Pertinent supplemental information should be referenced and included as attachments.

The SOI should be formatted using these headings:
COVER SHEET
INVESTIGATION AND FIELD INVENTORY
LAND OWNERSHIP RESEARCH
ENGINEERING AND DESIGN
CONSTRUCTION SPECIFICATIONS
SCHEDULE AND STAFF ASSIGNMENTS
ALTERNATIVES
EXAMPLES OF PREVIOUS WORK

COVER SHEET:
Include the project name(s), requisition number, the name of OFFEROR, including address, telephone number, FAX number (if available), email address (if available), and the name of the person to be contacted in connection with this SOI.

INVESTIGATION AND FIELD INVENTORY, LAND OWNERSHIP RESEARCH, ENGINEERING AND DESIGN, AND CONSTRUCTION SPECIFICATIONS:
For each of these four sections, include a general but complete narrative overview of OFFEROR=s assessment of the work to be performed and their ability to perform the work. Each section should clearly demonstrate OFFEROR=s understanding of the desired product and how they can provide that product. OFFERORs must show that they understand the scope and importance of each individual task. A mere repetition of the tasks taken from OWNER's scope of work will not be considered responsive to the Request for SOIs.

The SOI should describe or list previous work that demonstrates the firm=s ability to perform the work discussed under each of the four headings. Emphasis should be placed on previous work most closely related to that required by this REQUEST. The description should be sufficient to show OFFEROR's experience and qualifications. Resumes or synopses of qualifications and experience of the firm and key personnel may be included in this section. Limit resumes to those people to be assigned to the project. It is not necessary to reproduce lengthy *curricula vitae* or project lists if they will not aid in evaluation of the SOI.

TIME SCHEDULE AND STAFF ASSIGNMENTS:
The SOI should contain the proposed project schedule. Show, in bar chart form, the major activities required to do the work. Also summarize the firm's expertise by listing the personnel to be assigned, their functions in the project, their labor categories, and their time allocations.

ALTERNATIVES:
This section contains suggestions the firm has to improve OWNER's system of inventory and data collection. OFFERORs are encouraged to improve and update the methods and recommend improvements.

EXAMPLES OF PREVIOUS WORK:
This section contains examples of previous work that are relevant and will aid in the evaluation of the ability of OFFEROR to perform the work outlined in this REQUEST. It is not necessary to reproduce lengthy project lists if those projects are not pertinent to the work outlined in this REQUEST.

SOI EVALUATION

OWNER=s Ranking Committee will review, evaluate, and rank all SOIs using the criteria below with assigned weights as indicated (see the SOI evaluation score sheet on page 6). Each of the evaluation criteria must be addressed in the SOI. Each criterion will be given a score ranging from zero to five with five being the highest score possible. Each score will then be multiplied by the appropriate weighting factor to determine the total number of points earned.

Rating points will be assigned as follows:
0 = No response, no experience; not qualified
1 = Minimal experience; qualified
3 = Moderate experience; well qualified
5 = Extensive experience; highly qualified

The middle column of the evaluation score sheet lists weight factors. The weight assigned to a particular criterion in this column reflects the relative importance of that criterion. The column on the right will be used to record the total number of points (score times weight) earned for each criterion. The points will then be summed and total evaluation points will be used to rank OFFEROR's qualifications.

Evaluation Criteria:

Contract Terms: (qualifying/disqualifying)
Firm is able to meet the terms and requirements of the contract.

1. Quality and Suitability of SOI: (5%) (25 points possible)

   Package is clear, concise, and responsive. (weight = 5)

2. Investigation and Field Inventory: (32%) (160 points possible)

   a. Package shows an understanding of the goals of OWNER. (weight = 8)

   b. Package shows a sound overall understanding of the scope of work. Shows a working familiarity with a variety of abandoned mine closure technologies with knowledge of the limitations and advantages of each. Shows the ability to recognize wildlife use, including bats, of a mine opening. Exhibits an understanding of cultural resource, legal concerns/needs and their technical ramifications. (weight = 8)

   c. Technical approach to investigation and field inventory as defined in the scope of work shows a sound understanding of the needs of OWNER and the nature of the project area. (weight = 8)

   d. Direct experience and expertise with non-coal abandoned mine inventory and site investigation is similar to that described in the scope of work. Skill is evident in the use of GPS (global positioning system) equipment and software to locate and map abandoned mine openings. (weight = 8)

3. Land Ownership Research: (12%) (60 points possible)

   a. Ability to research and accurately determine surface and mineral ownership of each site, both patented and unpatented claims, is demonstrated. (weight = 3)

   b. Technical approach to landowner research as defined in the scope of work evidences a sound understanding of the needs of the OWNER and the nature of the project area. (weight = 4)

   c. Direct experience and expertise in land ownership and records research, particularly with mineral claim records, is demonstrated. (weight = 5)

4. Engineering and Design: (20%) (100 points possible)

   a. Technical approach to engineering and design work as defined in the scope of work evidences a sound

understanding of the needs of OWNER and the nature of the project area. (weight = 10)

b. Direct experience and expertise in design and engineering of abandoned mine reclamation projects, particularly shaft and adit closures, is shown. (weight = 10)

5. Construction Specifications: (16%) (80 points possible)

   a. Technical approach to development of specifications as defined in the scope of work shows a sound understanding of the needs of OWNER and the nature of the project area. (weight = 8)

   b. Demonstrates experience and expertise in preparing construction specifications and design drawings and possesses direct field experience with mine closure construction. (weight) = 8)

6. Time Schedule and Staff Assignments: (5%) (25 points possible)

   The allocation of time, personnel, and resources is appropriate to achieve the goals of the work in the time available. (weight = 5)

7. Alternatives: (5%) (25 points possible)

   Proposal suggests alternative approaches that save time or money and exhibits a capacity for innovative or creative problem solving. (weight = 5)

8. Product Capability and Quality: (5%) (25 points possible)

   Samples are provided of products from previous mine inventory/closure design work, such as inventory forms, specifications, design drawings, maps, etc. Product quality and media are compatible with OWNER's needs and hardware and software capabilities. (weight = 5)

COST PROPOSAL NOT REQUESTED

Please note that cost estimates for the WORK are not being requested as part of this REQUEST according to current state regulations. Cost data should *not* be submitted as part of any SOI. Formal negotiations with the successful OFFEROR will include resolution of a negotiated contract price and any pertinent cost estimates for the WORK.

CONSIDERATION OF STATEMENTS OF INTEREST

The State of Utah may select a successful OFFEROR based solely on the initial SOI, without any discussion of such SOI. Accordingly, each initial SOI should be submitted from the most favorable services standpoint. OWNER reserves the right to reject any and all SOIs received.

SAMPLE CONTRACT

The successful OFFEROR will negotiate and enter a contract agreement with the Utah Division of Oil, Gas and Mining. The contract agreement will be on a form similar to the agency contract attached as part of this REQUEST on page 8. In order for OFFEROR's SOI to qualify for evaluation, OFFEROR must be able to meet all requirements of this contract.

TERM OF CONTRACT

Notice to Proceed with the project will be issued immediately upon the award and execution of the contract. The contract will be for a period of one year with an option to renew for an additional one year at OWNER's discretion and by mutual agreement.

ADDITIONAL INFORMATION

Technical questions about the project should be directed to the project manager at the Division of Oil, Gas and Mining. Questions about proposal and procurement procedures should be directed to the Division of Purchasing. Contact people are:

Proposal:
Nancy Orton, Purchasing Agent

Technical questions:
Paul Wisniewski, Reclamation Specialist

Division of Purchasing
3150 State Office Building
Salt lake City, Utah 84114
(801) 538-3150
(801) 538-3882 fax
nancyo@utah.gov

Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114
(801) 538-5318
(801) 359-3940 fax
paulwisniewski@utah.gov

Deliver SOI to the Division of Purchasing only.

SOI EVALUATION SCORESHEET

Consultant: _____

Evaluator: _____

Date: _____

		SCORE (0-5)	**WEIGHT**	**POINTS**
1.	**QUALITY AND SUITABILITY OF SOI** (25 points possible)	_____	x 5	_____
2.	**INVESTIGATION AND FIELD INVENTORY** (160 points possible)			
	a. Understanding OWNER's goals	_____	x 8	_____
	b. Understanding scope of work	_____	x 8	_____
	c. Technical approach to investigation and field inventory	_____	x 8	_____
	d. Direct experience and expertise	_____	x 8	_____
3.	**LAND OWNERSHIP RESEARCH** (60 points possible)			
	a. Ability to research land ownership	_____	x 3	_____
	b. Technical approach to landowner research	_____	x 4	_____
	c. Direct experience and expertise	_____	x 5	_____
4.	**ENGINEERING AND DESIGN** (100 points possible)			
	a. Technical approach to engineering and design	_____	x 10	_____
	b. Direct experience and expertise	_____	x 10	_____
5.	**CONSTRUCTION SPECIFICATIONS** (80 points possible)			
	a. Technical approach to development of specifications	_____	x 8	_____
	b. Direct experience and expertise	_____	x 8	_____
6.	**TIME SCHEDULE AND STAFF ASSIGNMENTS** (25 points possible)	_____	x 5	_____
7.	**ALTERNATIVES** (25 points possible)	_____	x 5	_____
8.	**PRODUCT CAPABILITY AND QUALITY** (25 points possible)	_____	x 5	_____

TOTAL EVALUATION POINTS (500 points possible) _____

APPLICANT/VIOLATOR SYSTEM ELIGIBILITY CHECK

Federal regulations (30 CFR 874.16) effective July 1, 1994, require all successful OFFERORs on contracts funded through Title IV of SMCRA to be eligible under 30 CFR 773.15(b)(1) to receive a permit to conduct surface coal mining operations. In general, this means that the Utah Abandoned Mine Reclamation Program may not hire CONSULTANT who is or whose company is associated with a coal mine operator with outstanding unabated violations under SMCRA. The regulations further require that OFFEROR eligibility be confirmed by the Applicant/Violator System (AVS) at the U.S. Office of Surface Mining (OSM). Compliance checks are also required for all subcontractors receiving 10% or more of the total contract amount.

To comply with these rules, OFFERORs must provide the Division of Oil, Gas and Mining with information on ownership and control of the contractor's firm for AVS review. An OFFEROR must receive a recommendation of "Issue" or "Conditional Issue" from the OSM AVS office to be awarded the contract.

The two most qualified OFFERORs shall submit to OWNER, when requested, a copy of the "AML Contractor Information Form". The OWNER will provide forms for this submission. OWNER will submit ownership and control information to OSM for AVS review. OSM's review will be completed within 72 hours if ownership and control data entry is complete.

OFFERORs may choose to submit the required information prior to submitting the proposal in order to facilitate data entry by OSM and expedite the AVS review and contract award process. Forms may be obtained from OWNER.

The following information is required for the "AML Contractor Information Form":

- Contractor's identity (name, address, telephone, Social Security number, Taxpayer ID number).
- Contractor's legal structure (sole proprietorship, partnership, corporation).
- Identities (name, address, telephone number, position/title) of every officer, general partner, shareholder (10% voting stock), director, or other controlling entity.
- Identities of parties with the authority to commit the assets of the firm.
- Identities of other relationships that give direct or indirect authority over the execution of the work.
- All of the above information for any subcontractor with 10% or more of the contract amount.

STATE OF UTAH CONTRACT

1. CONTRACTING PARTIES: This contract is between the following agency of the State of Utah:

Department of Natural Resources (Agency Name) 560 (Agency Code) Division of Oil, Gas and Mining (Division), referred to as OWNER, and the following CONSULTANT:

Name

Address

City State Zip

Contact Person

Phone

LEGAL STATUS OF CONSULTANT
- ? Sole Proprietor
- ? Non-Profit Corporation
- ? For-Profit Corporation
- ? Partnership
- ? Government Agency

Federal Tax ID#_____
Vendor #_____
Commodity Code #_____

FINET Coding Block: Southport Engineering Contract AMR/045/912/EC

Fund	Agency	Org	Approp Unit	Expend Object	Grant Category	Project or Job
100	560	2881	REG			

2. GENERAL PURPOSE OF CONTRACT: The general purpose of this agreement is to:

   Provide professional engineering expertise in evaluating an abandoned mine project area for reclamation known as the Southport Project. The work includes conducting an inventory and investigation of mining features, designing reclamation, and preparing construction specifications. The details of the Scope of Work are included in Attachment C, which is attached hereto and incorporated as part of this contract.

3. PROCUREMENT: This contract is entered into in compliance with the *State of Utah Procurement Rules* and as a result of the Division of Purchasing procurement process on Bid Number_____, Requisition Number_____.

4. CONTRACT PERIOD: This contract is effective _____ and will terminate on _____ unless otherwise extended or terminated in accordance with the Terms and Conditions of the contract. This contract may be renewed for 1 additional 1 year term(s) at the option of OWNER.

5. CONTRACT COST: CONSULTANT will be paid by OWNER an amount not to exceed $_____, for costs authorized by this contract. OWNER shall withhold from payment an amount not to exceed 10% of the total cost of service for the WORK until all services and products pursuant to the Agreement are delivered and completed by CONSULTANT and OWNER has accepted and approved said products and services.

6. ATTACHMENTS INCLUDED AS PART OF THIS CONTRACT:
   Attachment A: Standard Terms and Conditions
   Attachment B: Special Terms and Conditions
   Attachment C: Scope of Work
   Attachment D: Deliverables Schedule
   Attachment E: Cost Schedule
   Attachment F: Time Schedule
   Attachment G: Services and Facilities Provided by Owner
   Attachment H: Amendments to the Agreement

Attachment I: Southport Project-Specific Information and Location Map
Attachment J: Mammoth Project Specific Information and Location Map

Appendix A: Consultant Performance Rating Form
Appendix B: Sample Inventory Form
Appendix C: Project Summary and Code Definitions
Appendix D: Shapefile Definitions
Appendix E: Directory Structure

Any conflicts between Attachment A and other Attachments will be resolved in favor of Attachment A.

7. DOCUMENTS INCORPORATED INTO THIS CONTRACT BY REFERENCE BUT NOT ATTACHED:
   a. All other governmental laws, regulations, or actions applicable to services authorized by this contract.
   b. Division of Oil, Gas and Mining General Conditions for Abandoned Mine Reclamation Projects.
   c. Statement of Interest to Inventory and Evaluate Abandoned Mine Features in the Oquirrh Mountains east of Stockton, Tooele County, Utah, is presented by CONSULTANT in response to OWNER's request for Statements of Interest for Southport Project, Reclamation Engineering and Design, Requisition Number _____ _____, Bid Number _____.

IN WITNESS WHEREOF, the parties sign and cause this contract to be executed.

Dated this _____ day of _____, 2002.

CONSULTANT

_____

_____
Corporation Secretary or Witness

OWNER
STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

_____
Mark R. Mesch, Administrator
Abandoned Mine Reclamation Program

_____
Lowell P. Braxton, Director
Division of Oil, Gas & Mining

APPROVED FOR AVAILABILITY OF FUNDS:

_____
Carl Roberts
Budget/Accounting, Divn of Oil, Gas & Mining

_____
Douglas G. Richins
Director, Division of Purchasing

_____
Kim S. Thorne
Director, Division of Finance

ATTACHMENT A: STANDARD TERMS AND CONDITIONS

A1. AUTHORITY: Provisions of this contract are pursuant to the authority set forth in 63-56, Utah Code Annotated, 1953, as amended, Utah State Procurement Rules (Utah Administrative Code Section R33), and related statutes which permit the STATE to purchase certain specified services, and other approved purchases for the STATE.

A2. CONTRACT JURISDICTION, CHOICE OF LAW, AND VENUE: The provisions of this contract shall be governed by the laws of the State of Utah. The parties will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Contract or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.

A3. LAWS AND REGULATIONS: Any and all supplies, services and equipment furnished will comply fully with all applicable Federal and State laws and regulations.

A4. RECORDS ADMINISTRATION: The CONTRACTOR shall maintain, or supervise the maintenance of all records necessary to properly account for the payments made to the CONTRACTOR for costs authorized by this contract. These records shall be retained by the CONTRACTOR for at least four years after the contract terminates, or until all audits initiated within the four years, have been completed, whichever is later. The CONTRACTOR agrees to allow STATE and Federal auditors, and STATE Agency Staff, access to all the records to this contract, for audit and inspection, and monitoring of services. Such access will be during normal business hours, or by appointment.

A5. CONFLICT OF INTEREST: CONTRACTOR represents that none of its officers or employees are officers or employees of the State of Utah, unless disclosure has been made in accordance with 67-16-8, Utah Code Annotated, 1953, as amended.

A6. CONTRACTOR, AN INDEPENDENT CONTRACTOR: The CONTRACTOR shall be an independent contractor, and as such, shall have no authorization, express or implied, to bind the STATE to any agreements, settlements, liability, or understanding whatsoever, and agrees not to perform any acts as agent for the STATE, except as herein expressly set forth. Compensation stated herein shall be the total amount payable to the CONTRACTOR by the STATE. The CONTRACTOR shall be responsible for the payment of all income tax and social security amounts due as a result of payments received from the STATE for these contract services. Persons employed by the STATE and acting under the direction of the STATE shall not be deemed to be employees or agents of the CONTRACTOR.

A7. INDEMNITY CLAUSE: The CONTRACTOR agrees to indemnify, save harmless, and release the STATE OF UTAH, and all its officers, agents, volunteers, and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this contract which are caused in whole or in part by the negligence of the CONTRACTOR'S officers, agents, volunteers, or employees, but not for claims arising from the State's sole negligence.

A8. EQUAL OPPORTUNITY CLAUSE: The CONTRACTOR agrees to abide by the provisions of Title VI and VII of the Civil Rights Act of 1964 (42USC 2000e) which prohibits discrimination against any employee or applicant for employment or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age; and Section 504 of the Rehabilitation Act of 1973, or the Americans with Disabilities Act of 1990 which prohibits discrimination on the basis of disabilities. Also, the CONTRACTOR agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the work place.

A9. SEPARABILITY CLAUSE: A declaration by any court, or any other binding legal source, that any provision of this contract is illegal and void shall not affect the legality and enforceability of any other provision of this contract, unless the provisions are mutually dependent.

A10. RENEGOTIATION OR MODIFICATIONS: This contract may be amended, modified, or supplemented only by written amendment to the contract, executed by the parties hereto, and attached to the original signed copy of the contract.

A11. DEBARMENT: The CONTRACTOR certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract), by any governmental department or agency. If the CONTRACTOR cannot certify this statement, attach a written explanation for review by the STATE.

A12. TERMINATION: Unless otherwise stated in the Special Terms and Conditions, this contract may be terminated, with cause by either party, in advance of the specified termination date, upon written notice being given by the other party. The party in violation will be given ten (10) working days after notification to correct and cease the violations, after which the contract may be terminated for cause. This contract may be terminated without cause, in advance of the specified expiration date, by either party, upon 90 days prior written notice being given the other party. On termination of this contract, all accounts and payments will be processed according to the financial arrangements set forth herein for approved services rendered to date of termination.

A13. SALES TAX EXEMPTION: The State of Utah's sales and use tax exemption number is E33399. The tangible personal property or services being purchased are being paid from State funds and used in the exercise of that entity's essential functions. If the items being purchased are construction materials, they will be converted into real property by employees of this government entity, unless otherwise stated in the contract.

A14. WARRANTY: The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah apply to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgement to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.

A15. PUBLIC INFORMATION: Contractor agrees that the contract will be a public document, as to distribution of copies, and Contractor gives the STATE express permission to make copies of the contract and/or of the response to the solicitation in accordance with the State of Utah Government Records Access and Management Act. The permission to make copies as noted will take precedence over any statements of confidentiality, proprietary information, copyright information, or similar notation.

OWNER Standard Terms and Conditions (Revision date: Apr 24, 2002)
Reference: Division of Purchasing Standard Terms and Conditions (Revision date: Apr 24, 2002)

ATTACHMENT B: SPECIAL TERMS AND CONDITIONS

B.1 LIQUIDATED DAMAGES: In the event CONSULTANT fails to complete the WORK within the time agreed upon in CONSULTANT's schedule as set forth in Part 4, or within such additional time as may have been allowed by OWNER, there will be deducted from any moneys due or that may become due CONSULTANT the sum of $200.00 per day, for each and every calendar day beyond the agreed or extended completion day, that the WORK remains uncompleted. Such sum is fixed and agreed upon by the OWNER and CONSULTANT as liquidated damages due the OWNER by reason of the inconvenience and added costs of administration, engineering and supervision resulting from CONSULTANT's default, and not as a penalty.

Permitting CONSULTANT to continue and finish the WORK or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, in no way operates as a waiver on the part of the OWNER of any of the OWNER's rights under the CONTRACT.

B.2 TERMINATION: This contract may be terminated, with or without cause, in advance of the specified expiration date, by either party, upon 30 days prior written notice being given to the other party. In the event of DEFAULT by CONSULTANT, termination may be executed as described by the DEFAULT Clause of the *DIVISION OF OIL, GAS AND MINING GENERAL CONDITIONS FOR ABANDONED MINE RECLAMATION PROJECTS*. On termination of this contract all accounts and payments will be processed according to financial arrangements set forth herein for services rendered to the date of termination.

B.3 NONAPPROPRIATION OF FUNDS: Financial obligations of the OWNER payable after the current fiscal year are contingent upon funds for the purpose being appropriated, budgeted or otherwise made available. If funds are not appropriated or otherwise available to continue the payment, this contract may be terminated without penalty by giving thirty (30) days written notice.

B.4 LIABILITY AND INDEMNIFICATION: It is agreed that CONSULTANT will at all times protect and save harmless, the State of Utah and all institutions, agencies, departments, authorities and instrumentalities of the State of Utah and any member of their governing bodies or their boards or commissions or any elected or appointed officers or any other of their employees or authorized volunteers, or private landowners who have consented to reclamation construction and/or have consented to allow ingress or egress to a reclamation site, as described in the general conditions of the project specifications which are included herein by reference, from any and all claims, damages of every kind and nature made, rendered or incurred by or in behalf of any person or corporation whatsoever, including the parties hereto and their employees that may arise, occur or grow out of any acts, actions, work or other activity done by CONSULTANT in the performance and execution of this CONTRACT.

B.5 CONSULTANT QUALIFICATIONS: CONSULTANT's past performance, organization, equipment, and ability to perform and complete the contract in the manner and within the time limit specified will be considered by the OWNER in the awarding of the CONTRACT. Beginning with contracts awarded in 1999, all CONSULTANTs who perform WORK on a Utah Abandoned Mine Reclamation Program (UAMRP) contract will be evaluated based on the Consultant Performance Rating Form (see Appendix A). A rating (or average rating in the case of multiple contracts) of ten points or more is required for any CONSULTANT who has previously performed WORK on a UAMRP project.

ATTACHMENT C: SCOPE OF WORK

C.1 THE WORK

The WORK to be performed is described in the following tasks: (1) literature review, (2) field inventory, (3) reclamation design, (4) land ownership research, (5) preparation of inventory report and deliverables. Inventory data will be incorporated into a customized Microsoft Access database. Developed in-house specifically for the AMRP, the database requires that data conform with standard and exact formats. Detailed requirements for each task are presented in sections C.2, C.3, C.4, C.5, and C.6.

C.2 LITERATURE REVIEW

CONSULTANT shall review and assimilate all forms, examples, and templates supplied by OWNER prior to beginning field inventory and utilize them for the WORK.

CONSULTANT shall conduct a thorough literature search for information pertaining to abandoned mines within the project area. The literature search will include but not be limited to UGS, USGS, and USBM Bulletins and Circulars, UMOS/CRIB database, BLM files, and 7.5-minute USGS topographic maps. CONSULTANT shall be aware that available literature lists many of the abandoned mine sites in the project areas but that other unrecorded mines do exist.

CONSULTANT shall conduct an aerial photograph review. Although coverage is not currently state-wide, many digital orthophoto quads (DOQs) are available for free download from http://agrc.its.state.ut.us/.

C.3 FIELD INVENTORY

C.3.1 INVENTORY APPROACH

CONSULTANT will develop a systematic inventory approach to ensure that all abandoned mines in the project area are identified and documented. It is important that the inventory approach is designed such that a logical geographic portion of the project area will be considered complete if funding falls short of covering the entire initial project area. Funding for each project is allotted based upon an initial estimate of the number of abandoned mines that will be found within the project area. When substantially more mines are found to exist within the project area than were initially estimated, the project area may have to be reduced in size. By using a systematic inventory approach it is possible to clearly delineate the area(s) in which the inventory has been completed. CONSULTANT shall provide a polygon shapefile (projbound.shp) that delineates the aerial extent in which inventory was completed (final project area). The shapefile shall contain the attribute data as specified in Appendix D.

C.3.2 TAG NUMBERS AND MARKERS

Each inventoried mine opening shall be assigned a **unique** Tag Number. The Tag Number consists of thirteen characters derived in the following way: one digit for the quadrant of the state, two digits for the township number, two digits for the range number, two digits for the section number, two letters for the opening type code and three digits for a sequential number in the section (see Appendix C-A). There shall be no sequential gaps in the Tag Numbers assigned in each section. Mine features shall be identified by the full Tag Number in all documents and tables in order to minimize confusion and the need for cross-referencing. Tag Numbers may be truncated only on permanent mine feature markers and where feature labels occur on maps.

CONSULTANT shall mark all mine features with permanent and lasting markers. For example, a steel washer may be stamped with the tag number and secured to competent rock surrounding the mine opening. Foil tags are not acceptable. At a minimum, markers shall be inscribed with partial Tag Numbers, consisting of the section number, the opening type code and a sequential number in the section with leading zeros omitted. For example, the marker for **3251705VO002** would be inscribed **05VO2**.

C.3.3 GPS DATA

All GPS data will be collected using a GPS unit capable of storing data in a data dictionary. GPS data must be accurate within 5 meters and suitable for output to an ESRI shapefile. A suggested data dictionary (GPS\proj.ddf) will be

provided by the OWNER (see Appendix E). CONSULTANT is encouraged to either modify or create a new data dictionary if doing so facilitates more efficient data collection.

CONSULTANT shall collect GPS location points for the following opening types: HO, HC, HP, VO, VC, VP, IO, SH, PI, and ES (see Appendix C-B for opening type code definitions). CONSULTANT shall GPS the perimeter (as a polygon) of any mine feature with a diameter greater than approximately 50 feet. CONSULTANT shall provide a mine feature point shapefile (projmines.shp) and a polygon shapefile of feature perimeters (projpoly.shp). Each shapefile shall contain the attribute data as specified in Appendix D.

CONSULTANT shall collect GPS line features for access routes to all hazardous mine features. Please note that many access routes already exist in digital format in the 1:24,000 scale roads and trails dataset (GISstate\SGID\st024\trrds.shp) provided by OWNER. CONSULTANT does not need to GPS roads and trails or segments thereof that are already contained in the trrds.shp file. Access routes are not necessarily roads or trails, but are the best access route to a mine site. Please refer to the access type codes in Appendix C-D. CONSULTANT shall provide an access route line shapefile (projroads.shp) with attribute data as specified in Appendix D.

CONSULTANT shall GPS project area roads in sufficient detail to allow contractors to find the correct road to any hazardous mine feature. This may require GPS coordinates for roads that do not lead to hazardous mine features (spur roads) for navigational purposes. GPS coordinates for spur roads need only be for 50 feet or so from their intersection with access routes as an indication of their presence.

C.3.4 INVENTORY FORMS

A significant component of the inventory is to determine which mine features are hazardous and therefore warrant reclamation work. OWNER recognizes that not all mine features are equally hazardous. Some mine openings in the project area are shallow holes or are in competent rock, while others are unstable and/or have extensive workings. OWNER considers the most common hazards to be fall and entrapment hazards created by mine openings and the host of problems associated with unrestricted access to deep underground workings. Falling rock hazards from unstable brows over portals, unstable highwalls, and unstable ground over shallow workings are also expected to be common hazards in the project area.

CONSULTANT is required to fill out abandoned mine inventory forms for all hazardous mine features (Engineering\InventoryForm2002.pub). Sample completed inventory forms are located in Appendix B. Note that it is **not** necessary to complete inventory forms for non-hazardous mine features which do not require reclamation action.

The *Access Description* on the inventory form should consist of a narrative detailing access directions to the mine opening. Directions should be sufficient such that someone with no prior knowledge of the site would easily be able to navigate to it. The *Site Description* on the inventory form should consist of a narrative description of the site. Any significant information pertaining to the opening or the site vicinity that is not described elsewhere on the inventory form should be recorded in the *Site Description*. The *Closure Recommendation* on the inventory form should consist of a narrative description of the closure recommendation as made in the field by a qualified Engineer.

CONSULTANT shall include plan view and cross-section sketches of all hazardous mine features. Sample completed site sketch forms are located in Appendix B. Site sketches shall utilize standard map notation and include a north arrow and scale. Each sketch shall show surface features, mine features, and the relationship of the site to adjacent landmarks. The site sketch should indicate photo locations and orientations. Dimensions listed on the sample inventory forms are those required for entry into OWNER's AMR database. Measurements collected in the field should, however, not be limited to the minimum required. CONSULTANT shall record sufficient measurement data on the site sketch for closure design, volume/area calculations, and cost of materials estimates.

CONSULTANT shall estimate materials quantities (e.g., cubic yards of backfill or square feet of wall) required to perform the reclamation action and the reclamation method (e.g., hand labor or heavy equipment). These estimated quantities and methods will be used to prepare site-specific work descriptions, a detailed cost schedule, and mine closure in the construction bid package.

CONSULTANT shall deliver original inventory forms in 3-ring binders with mine features sorted by tag number and indexed by cadastral section.

C.3.5 DIGITAL PHOTOS

CONSULTANT shall take both a close-up and an overview digital photo of each mine feature. Field inventory and photography shall not be performed on days when snow cover limits visibility of mining features. The photos shall be in JPG format with 2-megapixel resolution. Camera photo quality shall be set to 1792 X 1200 pixel resolution with BASIC JPEG image compression, which will yield a photo file size of approximately 400-700 kilobytes. At this file size, approximately 1300 photo files will fit on one 650-megabyte Read/Write CD.

CONSULTANT shall use the following naming convention for digital photo files: Tag Number + lowercase "i" (for inventory photograph) + a sequential number. For example, file names for two photos of HO1 in section 7 would be **3270407HO001i1.jpg** and **3270407HO001i2.jpg**.

CONSULTANT shall deliver digital photographs on CD (Photos\AMR045912) and in print on regular white paper included in the 3-ring inventory binders (see C.3.4). See Appendix E for CD directory structure. Each printed digital photograph shall be labeled with the tag number, date the photo was taken, photo description, and the direction in which the photo was taken. Mine features shall be sorted by tag number and indexed by cadastral section.

C.3.6 TABULAR INVENTORY DATA

OWNER shall provide CONSULTANT with a template for data entry in a Microsoft Excel spreadsheet (ProjSummary.xls). See C.6.2 for details. CONSULTANT shall tabulate the following inventory information as a component of ProjSummary.xls: Tag Number, opening type, mine name, AMR project number, landowner, photograph file name, county, USGS quad name, cadastral location, UTM coordinates, source of shapefile data, inventory date, opening azimuth, and dimensions. This information is required in the specific format described in Appendix B for import into OWNER's database. CONSULTANT shall include any additional tabular inventory information in ProjSummary.xls on the MAIN worksheet (see Appendix C).

C.4 RECLAMATION DESIGN

CONSULTANT shall assess the potential hazard at each mine feature and recommend the appropriate reclamation action, applying accepted engineering standards and practices. OWNER shall provide CONSULTANT with a set of standard closure design drawings (ClosureDrawings.pdf). Although CONSULTANT is encouraged to utilize existing closure designs where applicable, CONSULTANT shall develop custom closures designs and include custom closure design drawings in the construction specifications where they prove to be cost effective or unavoidable due to site-specific conditions. Custom closure designs include any significant modification of a standard closure design, non-standard applications of standard closure designs, or any non-standard closure design such as, but not limited to, site grading and earthwork, drilling, blasting, fabrication, etc. Calculation of loads, safety factor, etc will be required only for these custom closure designs. Application of any new closure method will be subject to approval by OWNER.

CONSULTANT shall recommend acceptable alternative closures in case first choice recommendation cannot be used due to cultural, wildlife, or other concerns. Cultural and wildlife surveys may not be available for use by the time CONSULTANT begins closure selection process. See section C.10, C.11, and C.12 for additional information.

C.5 LAND OWNERSHIP RESEARCH

CONSULTANT shall conduct research to determine property boundaries and ownership for affected lands in the project area. Affected lands are those that have mine features (open or closed) and/or access routes to mine features located on them. It is not necessary to collect detailed land ownership information for municipalities, subdivisions, etc. unless mine features are located there or access routes cross these lands.

CONSULTANT shall document all information necessary for OWNER to obtain Right of Entry Consents for reclamation construction (Reatly\ProjOwnership.xls). CONSULTANT shall utilize, where appropriate and available, the following sources of information to document land ownership: U.S. Bureau of Land Management (BLM) mining district sheets, BLM mineral surveys, BLM Notice's of Location, BLM mining claim abstracts, BLM LR2000 database reports, County Recorder's plat maps and title documents, Forest Service maps, Tax assessment records, etc. In general, OWNER expects that CONSULTANT shall obtain current land ownership information only; it is not necessary to obtain a full Chain of Title. However, it may be necessary to research land ownership records to a point where unclear and/or disputed ownership can be adequately and reasonably resolved. CONSULTANT shall provide photocopies (not to

exceed 11" x 17") of pertinent title documents, tax records, mineral surveys, LR2000 database reports, plats, etc. that serve to establish and corroborate and/or cross-check ownership.

CONSULTANT shall contact each landowner to confirm land ownership research. Under no circumstances will CONSULTANT negotiate closures or attempt to acquire consents of any kind. Landowner questions regarding the project or OWNER intent shall be directed to OWNER.

CONSULTANT shall plot all patented and unpatented claims and private parcels using legal or metes and bounds descriptions, where possible. Digitized claims and parcels are acceptable only when legal descriptions or metes and bounds descriptions from surveys and other records are not available.

CONSULTANT shall generate a single polygon shapefile containing all claims and private parcels (see Appendix D) and produce a set of maps that show land ownership boundaries in relation to all mine features and access routes.

CONSULTANT shall also tabulate the following land ownership information as a Microsoft Excel spreadsheet (ProjOwnership.xls): tag number; owner number (unique, sequential number beginning with the number 1, assigned by CONSULTANT); surface and subsurface owner name, percent ownership, address, and phone number; patented and unpatented claim name; land type (e.g., Federal, Private, etc.); claim type (patented or unpatented); land number (MS, Lot, UMC, or Parcel number); quarter section in which mine feature is located; county; ownership type (surface, minerals, or both); date of land acquisition; title information (book and page number), recommended closure type; log of correspondence with landowner; a list of sources utilized for land ownership verification (e.g., State Tax Commission), and map sheet reference. See example PDF files in Maps\examples on OWNER provided CD.OWNER shall provide CONSULTANT with a sample of the preferred document format (see Realty\examples).

C.6 INVENTORY REPORT AND DELIVERABLES

C.6.1 DIRECTORY STRUCTURE

OWNER's directory structure is designed to make the final transfer of data between CONSULTANT and the OWNER as efficient as possible. The directory structure in Appendix E reflects OWNER's file organization system. By receiving deliverables in this format, data transfer becomes a simple process of "dragging and dropping" folders from CONSULTANT supplied data CD to OWNER's local server. This directory structure becomes particularly important in the transfer of GIS data. Statewide GIS datasets and quad images are very large files that occupy a significant portion of OWNER's local server space. Because server space is costly and limited, it is necessary to minimize duplication of these large datasets and files. By requiring CONSULTANT to utilize OWNER's file organization system and naming conventions it becomes very easy for the OWNER to recognize and transfer only unique project datasets from the data CD to OWNER's server.

C.6.2 PROJECT SUMMARY SPREADSHEET

Projsummary.xls is provided as the main spreadsheet in which to keep all project data. The spreadsheet contains the following worksheet tabs: MAIN, INSTRUCTIONS, AMRADMIN, LOCATION, and ENGINEERING.

The MAIN tab is provided as the main worksheet in which to keep all of the project inventory data as CONSULTANT prepares and completes the project. Some color-coded example fields have been provided with names that correspond to field names of data required for entry in OWNER's AMR database. However, CONSULTANT is free to organize and format this table in any way that is most useful.

Upon completion of the project, CONSULTANT shall prepare all AMRADMIN, LOCATION, and ENGINEERING worksheet data for the AMR database. These tab names correspond to table names in OWNER's AMR database. Each tab contains column headings that correspond to the field names in OWNER's AMR database tables. It is important that all data be entered in the correct format, as defined in Appendix C. Also, see OWNER provided template (Engineering\ProjSummary.xls). It is important that inventory data contained in the AMRADMIN, LOCATION, and ENGINEERING worksheets is free of errors (e.g., 4020212HO005 instead of 4020212HO5) and that no data are missing. Error-checking at this point will potentially save the OWNER hours of error correcting at a later date. OWNER's AMR database runs on the Microsoft Access platform and utilizes data entry masks that will not allow the importation of data in non-standard formats.

The OWNERSHIP worksheets contain required ownership information fields that are populated with example data.

C.6.3 INVENTORY/ENGINEERING REPORT

CONSULTANT shall provide a report documenting methods used for field inventory, engineering and design, and cost estimation. Inventory/engineering report shall be provided in bound, hard copy and in Microsoft Word format and be located in Engineering\ProjReport.doc.

C.6.4 PROJECT COST ESTIMATE

CONSULTANT shall prepare, both in hard copy and electronic format, an estimated cost for reclamation construction, presented as lump-sum items including unit costs that will be broken out into individual items (as in the bid sheets for the construction bid package). The cost estimate shall be based on unit costs derived from accepted estimating practices, as well as known prevailing local rates and historical cost data provided by OWNER. Sources or derivations of unit costs shall be explained in the project cost estimate. The electronic copy of the cost estimate shall be in Microsoft Word 2000 format and be located in Engineering\ProjCostEstimate.doc.

C.6.5 CONSTRUCTION BID PACKAGE

CONSULTANT shall prepare two (2) bound hard copies of the construction bid package containing the following components:

- Bid Sheets
- General Technical Specifications
- Site-specific Construction Specifications
- Closure Drawings
- Project Maps
- Appendix: Schedule of Mine Closures

C.6.5.1 BID SHEETS

CONSULTANT shall prepare lump-sum bid sheets with a breakdown of individual mine site costs into logical construction units including detailed cost schedules with work broken down into line items & estimated quantities. Sufficient detail and accuracy will be provided to allow as many sites and items to be bid lump-sum as possible. Where indefinable quantities exist, unit price schedules will supplement the lump-sum quote for plus or minus contract adjustments. Bid sheets shall be provided in hard copy and in Microsoft Word format and be located in Engineering\BidPackage\ProjSpecs.doc.

C.6.5.2 GENERAL TECHNICAL SPECIFICATIONS

OWNER will provide a copy of General Technical Specifications to be used in the construction bid package. CONSULTANT shall develop Technical Specifications for site-specific requirements that are not currently covered by OWNER's standard Technical Specifications. Development of new Technical Specifications shall be considered as ADDITIONAL WORK and subject to the conditions of Amendments to the Agreement (Attachment G). CONSULTANT shall provide any newly developed Technical Specifications in a form suitable for use in a construction bid package. General Technical Specifications shall be provided in hard copy and in Microsoft Word format and be located in Engineering\BidPackage\ProjSpecs.doc.

C.6.5.3 SITE-SPECIFIC CONSTRUCTION SPECIFICATIONS

CONSULTANT shall prepare site-specific construction specifications organized into units to allow reclamation construction to occur in stages or to be accomplished by multiple contractors or sub-contractors. Site-specific construction specifications shall include sections describing related items such as: submittals required, conditions and restrictions, quality assurance, products and materials, execution, and payment. OWNER will provide a sample of the site-specific construction specifications. Site-Specific Construction Specifications shall be provided in hard copy and in Microsoft Word format and be located in Engineering\BidPackage\ProjSpecs.doc.

All mine sites listed in the construction specifications shall be referenced and organized sequentially by Tag Number. Any other numbering system that would require cross-referencing is not acceptable.

Site-specific specifications for each mine opening shall include the following:

- A detailed narrative description of the mine opening with dimensions, estimated quantities for reclamation, and other descriptive elements such as special conditions, restrictions, and hazardous conditions associated with the mine opening.

- A description of the closure work required at each mine opening, including closure methods. Work descriptions will cross-reference the General Technical Specifications and include any adjustment of the Technical Specifications to the site-specific needs. Construction requirements will be presented in sufficient detail to reduce the need for technical interpretation of specifications during bidding or construction.

- A detailed construction access description for each mine site. The description shall include the route to be taken (e.g., trail or cross-country), access type and condition, predicted disturbance, vegetation type affected, all access improvements such as temporary roads, stream crossings, etc. Access by foot shall be described but the same level of detail for equipment access is not required.

OWNER anticipates that the need for site grading and earthwork will be limited and the need for drainage control to be confined to accommodating portal drainage. Closures with provisions for portal drainage are covered by OWNER's standard Technical Specifications. Areas that will be disturbed by construction activities and access improvements that will require revegetation shall be measured in square feet or acres as appropriate. All technical revegetation information will be provided by OWNER.

The construction specifications shall address, as appropriate, any special measures required for worker safety and health during construction. Worker safety issues include exposure to: toxic materials, radiation, explosives (both abandoned explosives including misfires in the mines and explosives used in the course of reclamation), hazardous atmospheres (methane, black damp, carbon monoxide, radon gas, airborne dust, etc.), subsidence-prone ground, underground or surface coal fires, fall hazards, rockfalls, mine roof support, and unstable slopes and structures, as well as normal construction area worker health, safety, and industrial hygiene issues. Protective measures may include monitoring radiation levels and worker exposure (including record keeping), specifying monitoring instrumentation, requiring protective clothing or respirators, flagging and signage, specifying supplemental roof support, requiring safety harnesses and ropes, restricting activity in certain areas, specifying clean-up and decontamination procedures, etc.

C.6.5.4 CLOSURE DRAWINGS

OWNER will provide CONSULTANT with a set of standard closure design drawings (\Engineering\BidPackage\ClosureDrawings.pdf). CONSULTANT shall append OWNER's set of standard closure design drawings with design drawings for all custom closure types. CONSULTANT shall provide a complete set of closure drawings to be used as a component of the Construction Specification Package. New or modified versions of OWNER's standard closure design drawings shall be provided in hard copy and in Adobe Acrobat (.pdf) format and be located in Engineering\BidPackage\ClosureDrawings.pdf.

CONSULTANT shall prepare an appendix that includes a schedule of mine closures with Tag Number, map sheet reference, dimensions, reclamation action, and estimated quantities, to summarize the work for quick reference. This will be included as a table in the Microsoft Word construction specifications document (ProjSpecs.doc).

If technical deficiencies or other engineering related problems are encountered in the final product in its use during the bidding or construction process, OWNER may require further information, clarification, or verification of assumptions from CONSULTANT. It is expected that if such deficiencies are found, CONSULTANT will act to alleviate and resolve any conflicting, missing or unsubstantiated information found within the Construction Specifications at no additional cost. It is not the intent of OWNER to bind CONSULTANT to work that is not included as part of the WORK. OWNER's intent is to require CONSULTANT to complete the construction specifications accurately and in sufficient detail to perform construction work.

C.6.5.5 PROJECT MAPS

Maps of the project area shall contain all inventoried mine features and access routes and show sufficient detail for the contractor bidding on the project to have a clear understanding of the scope of the work. CONSULTANT shall submit hard copy maps on 8.5" x 11" sheets where practical or on 11" x 17" size at the maximum. Overlap of map sheets is helpful for ease of reproduction.

The scale and contour interval will be logical and sufficient to legibly show the mine features and topographic contours. Map scales will be in whole number increments of no less than 100'. Each map block shall contain a verbal and graphic scale, north arrow, legend, and be certified by the seal of a registered professional engineer in the State of Utah with a PE license in civil or mining engineering.

CONSULTANT shall also identify mine features on maps using an abbreviated Tag Number as a label so that labels are discernible. For example, an adit should be labeled 25HO5 instead of 4120434HO005 or, where section lines are shown and labeled, the same adit may be labeled HO5 without the section prefix.

CONSULTANT shall provide OWNER with Adobe Acrobat (.pdf) copies of all map sheets. Each PDF file should be set up to print the same size as the corresponding hard copy map with one PDF file per map. PDF file sizes should not exceed 1 megabyte in size. OWNER expects that most project areas will require multiple map sheets to represent all mine features at a scale in which individual labeled mine features and access routes are readily discernible. CONSULTANT shall work to minimize the number of map sheets needed to cover the area while still maintaining readability. At a minimum, OWNER requires two sets of map sheets to be provided in PDF format: a map set to be included with the construction specification package and a map set showing land ownership boundaries in relationship to hazardous mine features and access routes. PDF map files shall be named using the project number and sheet number as follows. For the Southport Project (AMR045912), for example, engineering map Sheet 2E of 7E shall be named 045912sh2Eof7E and land ownership map Sheet 1R of 2R, shall be named 045912sh1Rof2R. Maps shall be provided in PDF format and be located in Maps\ProjMaps.pdf. See example PDF files in Maps\examples on OWNER provided CD.

C.6.6 PORTABLE ARCVIEW PROJECT FILE

Portable ArcView project files can be run from CD or moved to OWNER's local server and run by editing the apr file to point to existing statewide data sets and images on OWNER's server. By keeping all directory structure pathnames on data CDs consistent, the process of editing the ArcView project files is quite simple and can be automated. When creating this portable project, CONSULTANT shall include on the CD all themes, extensions and customizations necessary to run the project. The ArcView project shall be submitted in draft form for testing and approval by OWNER before the final version is accepted.

CONSULTANT shall create an encapsulated, portable ArcView project in the following manner:

- All files referenced by the ArcView project file (.apr) must be located in the directory structure below /901project/, where 'project' is Southport or Mammoth.
- Set an environment variable 'mydrive' equal to the path above /901project/ (don't include '' marks).
- Edit the project (.apr) file in a text editor and replace all occurrences of the path above /901project/ with $mydrive.
- Open the project (.apr) to ensure that it works.
- Burn the entire directory below /901project/ to CD.
- Test the portable ArcView project by resetting the environment variable 'mydrive' equal to the letter of your CD drive and opening the project (.apr) on the CD to ensure that all links to data are intact.

Template.def is the layout template file created by ArcView to store layout templates. In order to make stored templates available in the portable project it is necessary to keep the template.def file with the project.apr file (in the project.apr's work directory). The layout template should provide OWNER with the fundamentals of CONSULTANT's map block. The goal is to allow the OWNER to modify or add datasets to maps views and easily reproduce layouts that approximate those maps produced by CONSULTANT.

C.7 EXCLUDED SERVICES

The following services and work are to be excluded from this contract, not considered WORK in this AGREEMENT,

and/or will be completed by the OWNER: Environmental Assessment and needed surveys (compliance with Endangered Species Act and National Historic Preservation Act), landowner consent for right of entry, any and all work requiring entering underground mine workings (this activity is extremely hazardous and is prohibited), surface drilling, coring, or test trenches requiring equipment mobilization, unless approved by OWNER.

C.8 PERSONNEL QUALIFICATIONS

All work shall be performed by, or under the direct supervision of, a professional engineer (PE) registered in the state of Utah with a PE license in civil or mining engineering. The specifications and drawings produced shall be certified and stamped with the seal of the professional engineer. Land ownership research shall be performed by an individual with extensive experience in patented and unpatented mining claim ownership research.

C.9 SPECIAL PRECAUTIONS

ABANDONED MINE SITES ARE HAZARDOUS. CONSULTANT will exercise extreme caution when working near abandoned mines, equipment and structures. Some hazards, such as dangerous atmospheres or unstable ground may not be readily apparent. CONSULTANT's safety plan must be adequate to protect all personnel working within the project area.

C.10 LANDSCAPE CONSERVATION ISSUES

OWNER's intent in reclamation design is to be as sensitive as possible to preserving existing vegetation and minimizing visual disturbance. OWNER prefers reclamation designs that minimize the use of heavy equipment, minimize equipment traverses across vegetated areas, employ manual labor and hand tools, and keep disturbance localized. The Construction Bid Package should include appropriate stipulations regarding equipment use and other activities as necessary to minimize disturbance.

C.11 CULTURAL RESOURCE ISSUES

OWNER anticipates that some of the mines in the Southport and Mammoth Project areas may be eligible for listing on the National Register of Historic Places. Under the National Historic Preservation Act of 1966, OWNER has an obligation to determine the effect of proposed actions on eligible sites and to mitigate adverse effects. OWNER will secure a contract with a cultural resource management consultant to evaluate the National Register eligibility of the project area and to evaluate the effect of the proposed reclamation on cultural resources.

OWNER's intent in reclamation design is to be as sensitive as possible to cultural values while still achieving the primary goal of protecting the public from abandoned mine hazards. In general, this means designing reclamation that avoids disturbance of low hazard cultural features (such as foundations) or minimizes damage to features (such as building masonry walls to seal adits instead of backfilling). CONSULTANT should evaluate a range of potential reclamation actions for each feature (including no action at low hazard features), since some actions may not be acceptable from a cultural resources standpoint.

C.12 WILDLIFE CONSERVATION ISSUES

OWNER's intent in reclamation design is to be as sensitive as possible in preserving mine openings that serve as habitat for wildlife, especially bats. Reclamation designs that allow wildlife access but prevent the public from entering the mine workings should be evaluated. OWNER's biological consultant conducts internal mine surveys to evaluate the use of abandoned mines as bat habitat. Potential impacts due to mine reclamation activities are also evaluated in relation to threatened and endangered species.

ATTACHMENT D: DELIVERABLES SCHEDULE

D.1 LIST OF DELIVERABLES

CONSULTANT shall provide the following deliverables:

ONE (1) HARD COPY OF EACH THE FOLLOWING:

- ❑ Inventory/Engineering Report
- ❑ Engineer's Cost Estimate
- ❑ Construction Bid Package
  - o Bid Sheets
  - o Construction Specifications (general technical and site-specific construction specs)
  - o Closure Drawings
  - o Construction Bid Package Maps
  - o Schedule of Mine Closures
- ❑ Land Ownership Package
  - o Ownership Tables
  - o Ownership Maps
  - o Copies of Ownership Records
- ❑ Original field inventory forms, site sketch maps, and prints of digital photographs, organized by Tag Number in 3-ring binders

ON PROJECT DATA CD (organized as shown in Appendix E: DIRECTORY STRUCTURE):

- ❑ Inventory/Engineering Report (ProjReport.doc)
- ❑ Engineer's Cost Estimate (ProjCostEstimate.doc)
- ❑ Construction Specifications (ProjSpecs.doc)
- ❑ Closure Drawings (ClosureDrawings.pdf)
- ❑ Project Construction Bid Package Maps (pdf files)
- ❑ Land ownership Maps (pdf files)
- ❑ Land ownership document (ProjOwnership.xls)
- ❑ Project Summary Spreadsheet (ProjSummary.xls)
- ❑ Digital photographs of each mine feature (jpg files)
- ❑ Data Dictionary (Proj.ddf)
- ❑ Original and differentially corrected GPS files
- ❑ Shapefiles and corresponding legend files (.shp, .avl)
- ❑ ArcView layout template file (template.def)
- ❑ Portable ESRI ArcView project file (Project.apr)

D.2 DELIVERY SCHEDULE FOR DRAFTS AND FINAL COPIES

CONSULTANT shall furnish all deliverables in draft form, including electronic deliverables, for approval prior to submitting final copies. **The OWNER strongly encourages CONSULTANT to submit draft components for approval as early as possible and on an ongoing basis. ONWER also expects ongoing communication with CONSULTANT as the work progresses, to ensure compatibility of the product with the OWNER's requirements.** Any revisions made of aforementioned draft by the OWNER will be incorporated into the product and resubmitted to the OWNER as a draft until the draft is considered complete and approved.

ATTACHMENT E: COST SCHEDULE

E.1 FIXED NOT-TO-EXCEED PRICE
Price is to be negotiated upon selection of CONSULTANT.

E.2 FIXED UNIT COST PRICES
Unit costs are to be negotiated upon selection of CONSULTANT.

ATTACHMENT F: TIME SCHEDULE

F.1 The successful CONSULTANT shall show in bar chart form, on a weekly schedule, the activities required to complete the SCOPE OF WORK as shown in this Agreement, based on a contract award of September 2, 2002 and approval to start WORK on September 3, 2002. All deliverables are due October 1, 2003. The OWNER may extend the contract for up to one (1) year beyond October 1, 2003 at OWNER's discretion.

F.2 The bar chart shall show field time and office time (literature review and research, land records research, construction specifications and report preparation, etc).

F.3 Constraints and float allowed for in the bar chart should be identified and explained in the schedule. Considerations for weather, access and normal delays should be accounted for within the schedule.

ATTACHMENT G: SERVICES AND FACILITIES PROVIDED BY OWNER

G.1 OWNER shall provide any information that has been gathered in the initial field inventories. Specifically, the following items will be furnished to CONSULTANT or made available for CONSULTANT's use:

a. Any site-specific information that OWNER has that would be helpful to CONSULTANT in accomplishing the WORK.

b. OWNER representative, as available, to accompany CONSULTANT to the project area for orientation.

c. Access to resources in OWNER's possession that may aid in the completion of the WORK, such as project and site files, correspondence, slides, photographs, and aerial photographs relating to the project area.

d. An example of project bid package with bid documents, general conditions, general technical specifications, and construction specifications for CONSULTANT's use as a guideline and format in developing the construction specifications. Both a printed package and a text file on CD will be provided.

e. Sample CD detailing required formats and submittals.

ATTACHMENT H: AMENDMENTS TO THE AGREEMENT

H.1 Amendments to the Agreement shall be in the form of a change order, signed by both parties and identical in format to the change order included on the following page.

H.2 Change orders shall become attached to and part of the Agreement under the terms of the Agreement with changes as stipulated on the change order. Change orders shall not release CONSULTANT from any other terms or conditions that apply and are a part of the Agreement.

H.3 Any additional WORK must be authorized by OWNER and must be in the form of a contract change order as an amendment to the Agreement. The change order must be fully executed prior to CONSULTANT undertaking any additional WORK.

CONTRACT CHANGE ORDER
UTAH DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

To: xxconsultant name
Address: Attention: xxcontract rep
xxaddress
xxcity, Utah 84xxx
Vendor Number: xxxxx
Commodity Code: xxxx

Date: xx, 2002
Project Name: Southport Project
Project Number: AMR/045/911/EC
Contract Number: 02-XXXX
Change Order No. 1

Fund	Agency	Org	Approp. Unit	Activity (Mine)	Grant Category	Project or Job
100	560	2881	REG			

You are hereby requested to comply with the following changes from the contract plans and specifications:

ITEM NO.	DESCRIPTION OF CHANGES IN QUANTITIES, UNIT PRICES, SCHEDULE, ETC.	INCREASE (DECREASE)
1.	x	$x.00

Net change in the contract price due to this order: $x.00

THE SUM OF $ x.00 IS HEREBY ADDED TO/DEDUCTED FROM THE TOTAL CONTRACT PRICE OF $x.00, AND THE TOTAL ADJUSTED CONTRACT PRICE TO DATE THEREBY IS $ x.00 . THE TIME FOR COMPLETION OF THE CONTRACT IS UNCHANGED/INCREASED/DECREASED BY x CALENDAR DAYS. WORK SHALL BE COMPLETED BY _____. CONTRACT SHALL EXPIRE ON _____. THIS DOCUMENT SHALL BECOME ATTACHED TO AND BECOME AN AMENDMENT TO THE CONTRACT AND ALL PROVISIONS OF THE CONTRACT WILL APPLY HERETO.

Approved as to form by Assistant Attorney General
Approved by
Contract Rep: _____ Date:_____
Approved by
AMR Admin: _____ Date:_____
Accepted by
Contractor: _____ Date:_____
Approved by
OWNER Budget Off: _____ Date:_____
Approved by
OWNER Director: _____ Date:_____
Approved by
Divn Purchasing: _____ Date:_____
Approved by
Divn of Finance: _____ Date:_____

ATTACHMENT I: SOUTHPORT PROJECT-SPECIFIC INFORMATION

I.1 PROJECT AREA LOCATION

The Southport Project area is located on the Stockton and Tooele USGS 7½' quadrangles directly east of Stockton and south of Tooele, in Tooele County, Utah. The project area, where elevations range from approximately 4,840 to 9,180 feet, takes in the westernmost reach of the central portion of Oquirrh Mountains, between Settlement and Soldier Canyons. The northeast boundary of the project area is formed by Settlement Canyon until turning south up Water Fork and over a saddle into the North Fork of Soldier Canyon. The southern margin of the project area is formed by Soldier Canyon. At the mouth of Soldier Canyon the project boundary heads north-northwest following the main paved road into Stockton. Generally, the northwest boundary of the project area is defined by State Route 36 between Stockton and Tooele. However, T4S, R5W, sections 13 and 24 and the east half of section 14, which lie on the west side of State Route 36, are also included in the project area. The majority of the mine sites are located on the west-facing slopes above the town of Stockton.

The Southport Project area takes in all or portions of the following sections:

T3S, R4W, Sections 32 & 33
T4S, R4W, Sections 3-6, 7-10, 14-18, 19-36
T4S, R5W, Sections 13, 14, 24, 25 & 36

General reclamation area boundaries of the Southport Project are shown on the location map at the end of this Attachment and are described in this section. The formal project boundary includes approximately 25 square miles. Mines are not evenly distributed in this area.

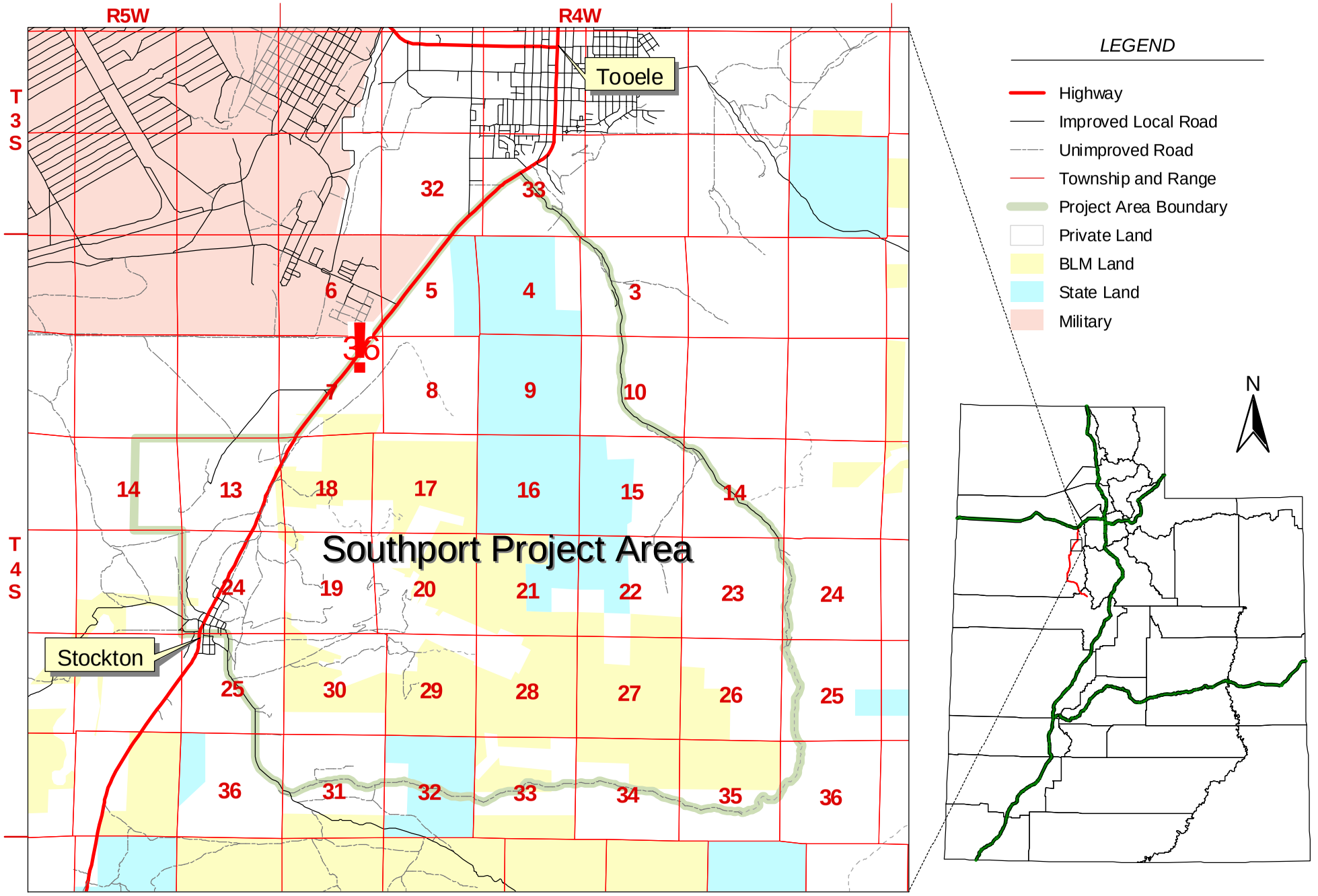
To access the Southport Project area from the center of Tooele (junction of Main and Vine streets) take Highway 36 south 11.8 miles (through Stockton) to the junction of Highway 36 with Highway 73. Turn left (east) on Highway 73 and drive 4.6 miles to a paved road named Ophir Town Site Road. Turn left (east) and drive for 3 miles to the town of Ophir. The main access to the Project, Ophir Town Site Road, is paved to the town of Ophir. Up canyon from Ophir the road is a maintained 2-wheel-drive gravel road. In general, the terrain is steep and rugged. Most of the sites will be accessible by either four-wheel-drive vehicles or by all-terrain vehicles (ATVs). Some of the sites will require foot access to reach the actual openings.

I.2 PROJECT AREA DESCRIPTION

The Southport Project area consists of an estimated **102** abandoned, hard-rock metal mines in the central Oquirrh Mountains. The sites are located in variable terrain; some are in the flats, some in the foothills and some in steep rugged topography. All of the mine openings in the project area are expected to be small in aerial extent and disturbance to the surrounding topography. General reclamation area boundaries of the Southport Project are shown on the attached location map.

To reach the suspected ore, the miners drove numerous adits, inclines, shafts, prospect pits, and trenches in areas of little or no easy access. Cultural features may remain at several of the sites. After the sites are evaluated as to hazard, the cultural features will be evaluated under a separate contract. The historic Stockton town site is located within the project boundary.

This is the seventh abandoned mine reclamation project in this area. OWNER will provide any information about the previous projects that is useful to plan this WORK. Fuel, food, and lodging are available in Tooele. The communities of Stockton and Ophir have only limited services.



Utah Oil, Gas and Mining

Dept. of Natural Resources
Division of Oil, Gas & Mining
Abandoned Mine Reclamation Program

SOUTHPORT PROJECT
AMR/045/912

PROJECT AREA LOCATION MAP

1 0 1 2 3 Miles

Drafted by MES	March 2002	Sheet 1

ATTACHMENT J: MAMMOTH PROJECT-SPECIFIC INFORMATION

J.1 PROJECT AREA LOCATION

The Mammoth Project area is located on the Eureka and Tintic Junction USGS 7½' quadrangles directly south of Eureka, in Juab County, Utah. Located in the northwestern portion of the East Tintic Mountains, elevations in the project area range from approximately 5,990 near Silver City to 8,100 feet on Mammoth Peak. The northern and western boundary of the project area is formed by State Route 6/50 that runs through Eureka and adjacent to Silver City. Silver Pass Road, which heads east from State Route 6/50 at the Silver City exit, forms the southern boundary of the project area. Silver Pass Road leads up Ruby Hollow, an east-west trending valley that cuts through the East Tintic Mountains to the Juab and Utah County line. The county line forms the eastern boundary of the project area.

The Mammoth Project area takes in all or portions of the following sections:

T10S, R2W, Sections 17, 18, 19, 29, 30, 31, 32 & 33
T10S, R3W, Sections 13, 23, 24, 25, 26, 35, & 36
T11S, R2W, Sections 5 & 6
T11S, R3W, Section 1

General reclamation area boundaries of the Mammoth Project are shown on the location map at the end of this Attachment. The formal project boundary includes approximately 9.5 square miles. Mines are not evenly distributed in this area.

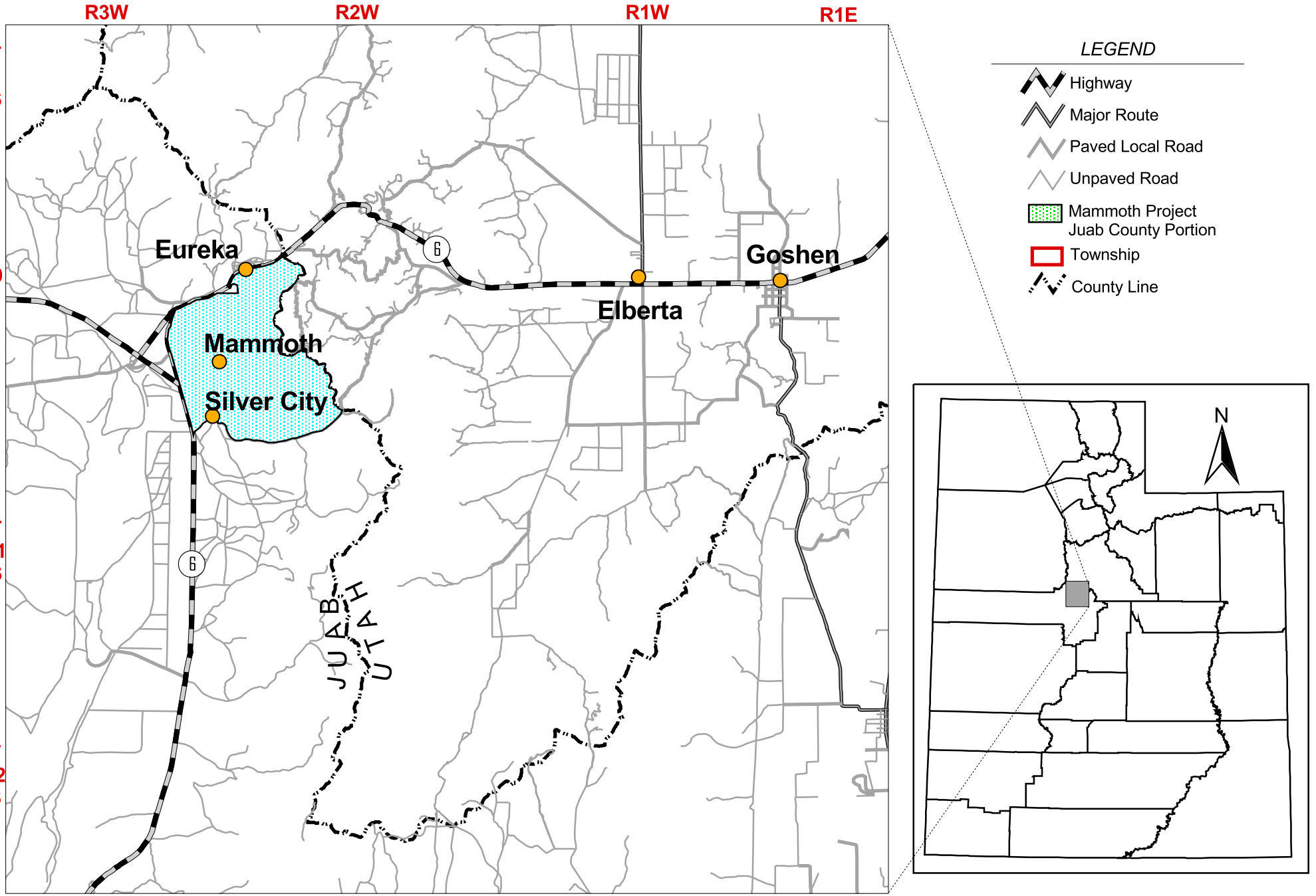
The Mammoth Project area may be accessed directly from Eureka or by roads that lead to Mammoth or Silver City. In general, the terrain is steep and rugged. Most of the sites will be accessible by either four-wheel-drive vehicles or by all-terrain vehicles (ATVs). Some of the sites will require foot access to reach the actual openings.

J.2 PROJECT AREA DESCRIPTION

The Mammoth Project area consists of an estimated **266** abandoned, hard-rock metal mines in the northwestern portion of the East Tintic Mountains. The sites are located in variable terrain; some are in the flats, some in the foothills and some in steep rugged topography. Most of the mine openings in the project area are expected to be small in aerial extent and disturbance to the surrounding topography with the notable exceptions of large heap leach piles at the mouth of Ruby Hollow (part of a bond forfeiture need not be inventoried) as well as the Dragon open pit mine and the Mammoth open stope.

To reach the suspected ore, the miners drove numerous adits, inclines, shafts, prospect pits, and trenches in areas of little or no easy access. Cultural features, such as wooden headframes, remain at several of the sites. After the sites are evaluated as to hazard, the cultural features will be evaluated under a separate contract. The historic Mammoth town site is located within the project boundary.

This is the third abandoned mine reclamation project in this area. OWNER will provide any information about the previous projects that is useful to plan this WORK. Goods and services including fuel, food, and lodging are available in Eureka. The communities of Mammoth and Silver City have little or no services.



Utah Oil, Gas and Mining

Dept. of Natural Resources
Division of Oil, Gas & Mining
Abandoned Mine Reclamation Program

MAMMOTH PROJECT
AMR/023/903

PROJECT AREA LOCATION MAP

2 0 2 4 6 Miles

Drafted by JCM	June 2002	Sheet 1

CONSULTANT PERFORMANCE RATING
Utah Division of Oil, Gas and Mining
Abandoned Mine Reclamation Program

Consultant: _____

Project: _____ AMR/ 000 / 900

Contract Number: 02-0000

Rating: Satisfactory= 1; Unsatisfactory= 0

_____ 1. Achieved the specified level of project quality and quantity.
_____ 2. Prompt, diligent, and systematic prosecution of work.
_____ 3. Adequate personnel (number and skill level).
_____ 4. Adequate equipment (number, type, and operating condition).
_____ 5. Effective management and supervision of work.
_____ 6. Cooperation, responsiveness, and communication with project manager.
_____ 7. Cooperation and timely response in negotiation of contract changes.
_____ 8. Cooperation in negotiation of claims.
_____ 9. Record of prompt payment for labor, materials, equipment, and subcontract work.
_____ 10. On-time submission of necessary documents and reports.
_____ 11. Compliance with all applicable federal, state, and local laws and regulations.
_____ 12. Minimized the adverse effect of activities on the public and the environment.
_____ 13. Cooperation with landowners and/or utilities.

_____ = **Total** = **Performance Rating**

Attach explanations of all "Unsatisfactory" ratings.

Rated by: _____ Date _____
Utah AMR Project Manager

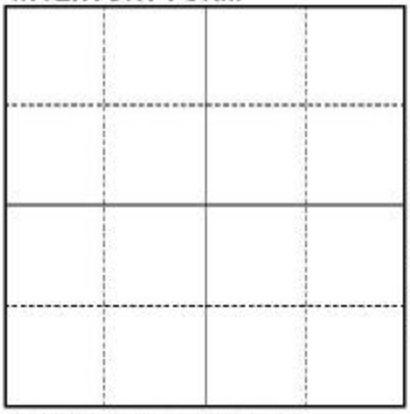
Reviewed by: _____ Date _____
Utah AMR Program Administrator

A consultant with a Performance Rating (or average rating if there is more than one rating) of 9 or less fails to pre-qualify.

Rev 01/05/99

INVENTORY FORM

SOUTHPORT PROJECT
AMR/045/912



Indicate the opening location in section.

Tag Number _____

Mine Name _____

GPS File Number _____ County _____

7.5' Quad Name _____ Elevation _____ ft

Quarter Section ___¼ ___¼ ___¼ Slope Aspect _____

CRIB Number _____ Commodity _____

Type: ☐ *Coal or* ☒ *Non-coal*

OPENING TYPE

- ☐ HO ____ azimuth
- ☐ IO ____ azimuth ____ slope of incline
- ☐ VO 0 azimuth
- ☐ ____ other (use opening type codes)

ACCESS

SITE	*OPENING*	*TYPE*
☐	☐	XC (x-country, no established trail)
☐	☐	FOOT (foot trail)
☐	☐	ATV (ATV/motorcycle trail or road)
☐	☐	4WHEEL (4-wheel drive road)
☐	☐	2WHEEL (2-wheel drive road)
☐	☐	PAVED (paved road)

POSSIBLE CLOSURE TYPE *Check all that are possible.*

- ☐ BFH (backfill, hand labor)
- ☐ BFM (backfill, heavy machinery)
- ☐ WALL-B (concrete block wall)
- ☐ WALL-S (native stone wall)
- ☐ BG (bat gate)
- ☐ BG-CMP (culvert bat gate)
- ☐ GRATE-B (shaft grate, grade-beam)
- ☐ GRATE-P (shaft grate, pinned)
- ☐ PUF (polyurethane foam)
- ☐ CONCRETE (concrete slab or plug)
- ☐ PROBE (probe for possible opening or voids)
- ☐ CUSTOM (standard closure designs not appropriate)

QUANTITY: _____ cu yds, *or* _____ sq ft

CONDITION OF ENTRANCE/COLLAR

- ☐ Completely collapsed, no access to workings
- ☐ Partially collapsed/sloughing at entrance/collar, workings visible but not accessible
- ☐ Partially collapsed/sloughing at entrance/collar, workings accessible
- ☐ Open for access with little or no collapse/sloughing
- ☐ Obstruction at opening makes evaluation of condition impossible

Comment: _____

ENTRANCE/COLLAR SUPPORTS *Present? Yes / No*

Description: _____

Removal necessary for recommended closure? Yes / No

MATERIAL SOURCE *Sufficient for closure? Yes / No*

- ☐ DUMP (mine dump) _____ cu yds
- ☐ SCALE (scale down from brow/adjacent slope)
- ☐ BLAST (blast from rock brow or adjacent face)
- ☐ STONE (stone suitable for bulkhead within 100 ft)
- ☐ NONEAVAIL (materials not present)

COMPETENCE OF OPENING/HOST ROCK

- ☐ Unconsolidated soil (unstable)
- ☐ Friable (unstable)
- ☐ Highly jointed, fractured (unstable)
- ☐ Somewhat jointed (fairly stable)
- ☐ Massive (stable, competent)

Rock suitable for pinned anchors? Yes / No

Utah Department of Natural Resources
Division of Oil, Gas and Mining
Abandoned Mine Reclamation Program

SITE VISITATION: ☐ Low ☐ Medium ☐ High

Evidence: _____

Inventoried by: _____

Date inventoried: _____

File: O:\Administrative\Vendors\Engineering\2002\SampleDirectoryStructure\EngineeringInventoryForm2002.pub *Revised: June 2002*

SOUTHPORT PROJECT
AMR/045/912

CULTURAL FEATURES
- ☐ None observed
- ☐ Entrance/collar supports
- ☐ Mine rail/ore cars
- ☐ Machinery/equipment
- ☐ Structures

Comments: _____

WILDLIFE
- ☐ None observed
- ☐ Bats present/evident
- ☐ Birds present/evident
- ☐ Cats present/evident
- ☐ Herps present/evident
- ☐ Other: _____

Comments: _____

VEGETATION
Type/Comments: _____

Tag Number _____

HAZARDOUS MATERIALS
- ☐ None observed
- ☐ Explosives
- ☐ Hazardous chemicals

Comments: _____

WATER
- ☐ No evidence of water
- ☐ Evidence of periodic water (mud cracks, etc.)
- ☐ Saturated soil
- ☐ Standing water in opening
- ☐ Discharge flowing from opening

Comments: _____

PALEO RESOURCES Present? *Yes / No*
Comments: _____

WORKER SAFETY CONCERNS (loose rock, etc.)
Type/Comments: _____

ACCESS DESCRIPTION: (road log from prominent point within project area)

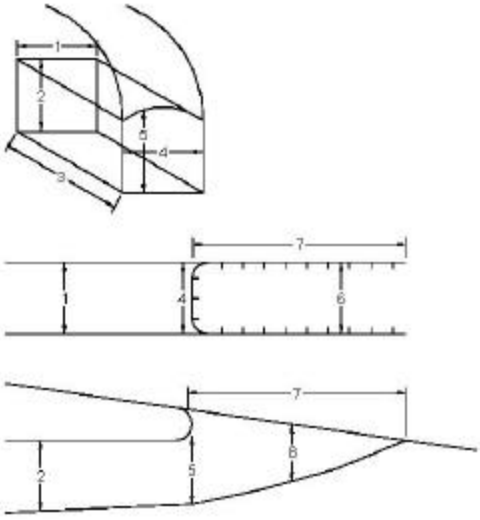
SITE DESCRIPTION:

File: O:\Administrative\Vendors\Engineering\2002\SampleDirectoryStructure\Engineering\InventoryForm2002.pub *Revised: June 2002*

HORIZONTAL or INCLINED OPENING

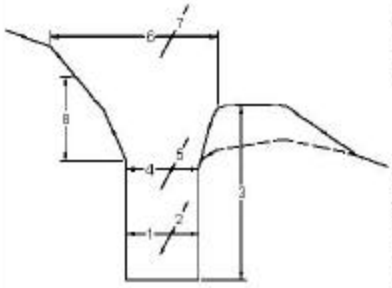
SOUTHPORT PROJECT
AMR/045/912

Tag Number _____



		Feet
Inside Width	1	
Inside Height	2	
Inside Depth	3	
Workings extend beyond visible limits? *Yes / No*		
Crosscuts, other workings visible? *Yes / No*		
Opening Width at brow	4	
Opening Height at brow	5	
Faceup Trench Width	6	
Faceup Trench Length	7	
Faceup Trench Depth at brow	8	
Distance in from brow to possible gate/wall location		

VERTICAL OPENING



		Feet
Inside Width	1	
Inside Length	2	
Inside Depth	3	
Workings extend beyond visible limits? *Yes / No*		
Crosscuts, other workings visible? *Yes / No*		
Opening Width at base of collar	4	
Opening Length at base of collar	5	
Collar Width	6	
Collar Length	7	
Collar Depth	8	
Distance down from top of collar to possible shaft grate location		

NOTE: *Dimensions listed here are representative and required for entry into the AMR database. Measurements collected in the field must be sufficient for closure design and should not be limited by those listed here.*

CLOSURE RECOMMENDATION:

File: O:\Administrative\Vendors\Engineering\2002\SampleDirectoryStructure\EngineeringInventoryForm2002.pub *Revised: June 2002*

SITE SKETCH AND PHOTO ORIENTATION

SOUTHPORT PROJECT
AMR/045/912

Digital Camera: _____
Digital Photo Number (CloseUp): _____
Digital Photo Number (Overview): _____

Tag Number _____

PLAN VIEW:

CROSS-SECTIONAL VIEW:

File: O:\Administrative\Vendors\Engineering\2002\SampleDirectoryStructure\EngineeringInventoryForm2002.pub *Revised: June 2002*

APPENDIX C: PROJSUMMARY AND CODE DEFINITIONS TABLES

	FIELD NAME	FIELD DESCRIPTION	
A	TAG NUMBER	Unique identifier for each opening formatted as follows: 1-digit Quadrant number + 2-digit township + 2-digit range + 2-digit section + 2-letter opening type + 3-digit sequential opening number (e.g., 4230232HO001).	
	TYPE	"C" = Coal, "N" = Non-coal.	AMR DATABASE AMRadmin Table
	MINE NAME	Legitimate mine name from literature (e.g., Copper King No. 1). If none, leave blank.	
	PROJECT NUMBER	AMR + county number + sequential number (e.g., AMR/045/912).	
B	OPENING TYPE	Two-letter code indicating type of mine opening (e.g, HO). See codes below.	
C	LANDOWNER	Code indicating land status of surface (e.g., PRIVATE). See codes below.	
	INVENTORY PHOTOGRAPH	Representative inventory photograph formatted as follows: Folder name = AMR Project number; Filename = Tag Number + "i" suffix (for inventory)+ sequential number indicating multiple photographs of the same opening + jpg (e.g., AMR045912\4230232HO001i1.jpg).	
	COMMENT	Miscellaneous comments (e.g.,	
	COUNTY	County name (e.g, Tooele)	AMR DATABASE Location Table
	7.5' QUAD NAME	USGS 7.5' quad name (e.g., Stockton).	
	TOWNSHIP	Township number followed by N for North or S for South and no spaces (e.g., 23S).	
	RANGE	Range number followed by E for East or W for West and no spaces (e.g., 02E).	
	SECTION	Two-digit section number. Use a leading zero for numbers 1-9 (e.g., 32)	
	QUARTER SECTION	Quarter section info without spaces (e.g., NW4SE4NE4).	
	UTM X	UTM X coordinate (easting) with no decimal places or commas (e.g., 389941).	
	UTM Y	UTM Y coordinate (northing) with no decimal places or commas (e.g., 4478488).	
	SOURCE	How was mine location (UTM) determined, by GPS or on-screen digitizing (e.g., digitized)?	
	DATE INVESTIGATED	Date of inventory investigation used for final engineering designs (e.g., 08/22/2002)	AMR DATABASE Engineering Table
	AZIMUTH	Azimuth for horizontal features determined by looking into the opening, 0 for all vertical features and non-zero for HO, HC, IO (e.g., 215).	
	INSIDE WIDTH	Width in feet of adit, shaft, etc. inside of opening (e.g., 8 ft).	
	INSIDE HEIGHT	Height in feet of adit or second dimension of shaft inside of opening (e.g., 5 ft).	
	INSIDE DEPTH	Length in feet of adit or depth of shaft (e.g., 45 ft). Enter "Yes" in next field if you cannot see the end.	
	PLUSLENGTH	Yes or No, does the opening extend beyond visible limits (e.g., No)?	
	OPENING WIDTH	Representative value for opening width at brow (e.g., 6 ft).	
	OPEN HEIGHT	Representative value for opening height at brow or second dimension of shaft (e.g., 8 ft).	
	FACEUP/COLLAR WIDTH	Representative value for width of adit face-up trench or surface width of shaft collar (e.g., 15 ft).	
	FACEUP/COLLAR LENGTH	Representative value for length of adit face-up trench or second surface dimension of shaft collar (e.g., 85 ft).	
	FACEUP/COLLAR DEPTH	Representative value for height of adit face-up trench or depth of shaft collar (e.g., 10 ft).	
	ELEVATION	Elevation of the opening (e.g., 7,680 ft).	
	RAD_ALPHA	Alpha radiation reading in working levels (e.g., 1.2 WL).	
	RAD_GAMMA	Gamma radiation reading in micro REMs per hour (e.g., 160 µR/h).	
D	SITE ACCESS	Access to the site is to the base of the dump, close proximity or within 100 feet (e.g., 2WHEEL). See codes below. This field should describe the site access as it stands without any improvements.	
D	OPENING ACCESS	Access to the opening is right to the entrance itself (e.g., XC). See codes below. This field should describe the opening access as it stands without any improvements.	
E	IF_CLOSURE TYPE	Recommended closure type (e.g., BFM). See codes below. Data from inventory form as listed in the closure schedule. Structures built in adits or over shafts should have their own Tag Number with the "ES" feature type, so they will received their own reclamation method code.	
	IF_QUANTITY	Closure material quantity data from inventory form in cubic yards or square feet (e.g., 6 cy).	
F	IF_MATERIAL SOURCE	Source of closure material (e.g., DUMP).	
	IF_CULTURAL FEATURES	Cultural Features Present. Data from inventory form.	
	IF_WILDLIFE	Wildlife Present. Data from inventory form.	
	IF_HAZARDS	Hazards Present. Data from inventory form.	
	IF_WATER	Water Present. Data from inventory form.	
	IF_PALEO	Paleontological resources present. Data from inventory form.	
	MINE GROUP NAME	Reclamation mine group name as defined in the specifications (e.g., Stockton Group).	
	MAP SHEET	Reference number of map sheet on which the opening islocated (e.g., 1E)	

LABEL	Opening type + opening number, without leading zeros (e.g., HO2).	
OWNER NUMBER	Sequential number assigned to facilitate cross-referencing (e.g., 1).	Ownership Table
OWNER NAME	Name of owner (e.g., John D. Stevenson, Joint Trust).	
QUARTER SECTION	Quarter section information with no spaces (e.g., NWSENE).	
COUNTY	County name (e.g., Tooele).	
OWNER TYPE	S = surface ownership, M = minerals ownership, B = both surface and minerals ownership	
LAND AQUIRED	Date land was acquired by the current owner (e.g., 01/06/1979).	
CLAIM NAME	Name of claim (e.g., Copper King)	
CLAIM TYPE	P = patented claim, U = unpatented claim.	
LAND NUMBER	MS, Lot, UMC or Parcel number (e.g., MS5128).	
MAP SHEET	Reference number for map sheet on which the claim is located (e.g., 1R).	
PERCENT OWNER	Owner's percent ownership of a claim or parcel (e.g., 50%).	
TITLE INFO	Book and page number of the title document (e.g., 12, 215).	

A TAG NUMBER

4230412HO001 is translated as:

4 = Quadrant within the state. Salt Lake Base Meridian: NE = 1, NW = 2, SW = 3, SE = 4; Uinta Special Meridian: NE = 5, NW = 6, SW = 7, SE = 8.

23 = Two-digit township number.* Based on the quadrant number of 4, this would be T23S.

04 = Two-digit range number.* Based on the quadrant number of 4, this would be R04E.

12 = Two-digit section number.

HO = Two-letter opening type code.

001 = Three-digit sequential number within the section.

*For townships and ranges that are "halves," the numbers will be assigned as follows. Since there are fewer than 50 townships and ranges, simply add 50 to the township or range number. The 5 in '50' indicates that you're dealing with a 'half' and all you have to do then is mentally subtract 50 to get the correct township or range number.

Township Halves	Township renumbered	Range Halves	Range renumbered
1.5S	51S	1.5E	51E
11.5S	61S	8.5E	58E
15.5S	65S	17.5E	67E
19.5S	69S	1.5W	51W
20.5S	70S	2.5W	52W
28.5S	78S	4.5W	54W
29.5S	79S	5.5W	55W
30.5S	80S	6.5W	56W
32.5S	82S	8.5W	58W
35.5S	85S	9.5W	59W
37.5S	87S	10.5W	60W
38.5S	88S	14.5W	64W
40.5S	90S		

B OPENING TYPE CODES (codes in gray are not typically used)

HO	**H**orizontal **O**pening (adit)	Open adit or tunnel that, due to depth and/or stability of the host rock, is considered to be a hazard. Inventory forms, photos, and GPS point location required.
HC	**H**orizontal **C**losed Feature (once extended further)	Adit or tunnel that was once open but is now closed by man or nature. It is often possible to determine whether it was once deeper by looking at the size of the dump. These features should be photographed and logged as points with the GPS. Inventory forms are required only if HC is hazardous and therefore requires reclamation action.
HP	**H**orizontal **P**rospect (never extended further)	This is a feature that may look the same as an HC, but by the dump size you can see that it has never been any deeper. Horizontal prospect refers to features that pose NO hazard. These features may be open adits or tunnels that are short enough to pose NO hazard. These features should be photographed and logged as points with the GPS, but no inventory forms are required.
VO	**V**ertical **O**pening (shaft)	Open shaft that is deep enough to be a hazard, meaning a person could not walk out if he or

		she fell in. Inventory forms, photos, and GPS point locations are required.
VC	**V**ertical **C**losed Feature (was once deeper)	Vertical opening that is caved shut by man or nature. You can often determine whether it was once deeper by looking at the size of the dump. These features should be photographed and logged with the GPS as point locations. Inventory forms are required only if VC is hazardous and therefore requires reclamation action.
VP	**V**ertical **P**rospect (was never deeper)	Small pit that may look like a VC, but by the dump size you can see that it has never been any deeper. These features are shallow enough to pose NO hazard, meaning a person could walk out of it if he or she were to fall in. These features should be photographed and logged as point locations with the GPS, but no inventory forms are required.
IO	**I**nclined **O**pening	Mine opening that is clearly not horizontal or vertical but inclined. There is no IC or IP designation because when the feature is closed or very shallow, it is difficult to tell whether it was horizontal, inclined, or vertical. Inventory forms, photos, and GPS point locations are required.
SH	**S**ubsidence **H**ole	Typically vertical openings that have subsided into mine workings. Inventory forms required only if feature is hazardous and requires reclamation action, otherwise feature needs only to be photographed and logged with the GPS as point locations.
PI	Open **Pi**t	These are large open pits or excavations. They may or may not have dangerous highwalls. Inventory forms required only if feature is hazardous and requires reclamation action, otherwise feature needs only to be photographed and logged with the GPS as polygons.
ES	**E**quipment & **S**tructures	Where structures and equipment are inseparable from mining features, they should be photographed and logged as point locations with the GPS, but no inventory forms are required. Where structures and equipment are separated from the areas of mining activity, recordation is optional. Structures and equipment may or may not be hazardous.
DH	Drill Hole	
WP	Dangerous Pile & Embankment	
CS	Clogged Streams	
CL	Clogged Stream Lands	
DW	Dangerous Highwall	
DS	Dangerous Slide	
UF	Underground Mine Fire	
SB	Surface Burning	
WB	Hazardous Water Body	
WA	Polluted Water: Agricultural & Industrial	
WH	Polluted Water: Human Cons	
DI	Dangerous Impoundments	
IW	Industrial & Residential Waste	
MO	Mine Openings	
GO	Gobs	
SA	Spoil Area	
DP	Piles & Embankments	
SP	Slump	
HW	Highwall	
HR	Haul Road	
BE	Bench	
EF	Equipment Facilities	
SL	Slurry	
WT	Water Problems	
OT	Other	
TA	Mill Tailings Area	

C LANDOWNER CODES

US-BLM	Federal Land Administered by the Bureau of Land Management
US-FS	Federal Land Administered by the Forest Service
US-NPS	Federal Land Administered by the National Park Service
ST-PARK	Utah State Park
ST-SITLA	Utah State Institutional and Trust Lands Administration
COUNTY	County Land

MUNICIPAL	Municipal Land
PRIVATE	Private Land

D SITE/OPENING ACCESS TYPE CODES

XC	Cross-country traverse with no established trail or road.
FOOT	Defined or established foot-trail.
ATV	ATV and/or motorcycle trail or road.
4WHEEL	Unpaved 4-wheel drive road; not typically maintained and only suitable for a high clearance vehicle in all or part; not suitable for a passenger car.
2WHEEL	Unpaved 2-wheel drive road; typically maintained and suitable for a low clearance vehicle such as a passenger car.
PAVED	Paved road.

E CLOSURE TYPE CODES (IF_RECLAMATION METHOD)

BFH	Backfill (hand labor)
BFM	Backfill (heavy machinery)
BF	Backfill (method unspecified or unknown)
Wall-B	Concrete Block Wall (+/- pillaster)
Wall-B/BFH	Block wall + hand backfill
Wall-B/BFM	Block wall + machine backfill
Wall-B-x	Block wall + secondary method
Wall-S	Native stone wall
Wall-S/BFH	Stone wall + hand backfill
Wall-S/BFM	Stone wall + machine backfill
Wall-S-x	Stone wall + secondary method
BG	Bat gate (manganal steel)
BG-x	Bat gate + secondary method
BG-cmp	Culvert bat gate
Grate-B	Rebar shaft grate (grade-beam, +/- I-beam)
Grate-P	Rebar shaft grate (pinned)
PUF	Polyurethane foam
Door	Adit door
NET	Cable net
Steel Fab	Grates, doors, panels, etc. fabricated with steel
Concrete	Concrete slab or plug
Probe	Probe only, no further closure
Compound Custom	More than one type used
Custom	Non-standard design
Demolition	Demolition of structure

F MATERIAL SOURCE CODES

DUMP	Mine dump.
SCALE	Scale rock down from brow and/or adjacent hillslope.
BLAST	Blast rock down from brow or adjacent face of mine feature.
STONE	Stone suitable for bulkhead located within 100 ft of mine site.
NONE	No materials available on or near site.

APPENDIX D: SHAPEFILE DEFINITIONS

Shapefiles shall be in a format compatible with ArcView 3.2a or ArcView 8.1. Datasets shall be projected in the NAD27 datum and must be in UTM coordinates for Zone 12 North. Each shapefile submitted by CONSULTANT shall be accompanied by an ArcView legend file (.avl) of the same name that symbolizes the data as show on the project maps. ArcView shapefiles shall be located in the GISproj folder of the directory structure as described in Appendix E.

PROJBOUND.SHP (polygon)
Aerial extent of completed inventory.

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
NAME	25	String	Project name	Southport
AMR_NUMBER	15	String	AMR + County number + Sequential number	AMR/045/912
TYPE	16	String	Coal or Non-coal (C for Coal, N for Non-coal)	N
ACRES	16	Number	Project area acreage	15,799

PROJMINES.SHP (point)
All inventoried mine features.

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
TAGNUM	18	String	Unique identifier for each opening. Quadrant number + township + range + section + opening type + sequential opening number in section	4230232HO001
OPENTYPE	5	String	Two-letter code indicating type of mine opening. See codes in Appendix C-B.	HO
AZIMUTH	5	Number	Azimuth of horizontal features (looking into the opening, zero for VO, VC, VP, SH, PI, ES and non-zero for HO, HC HP, IO)	215
ROTATION	4	Number	ROTATION = (630 – AZIMUTH); used because ArcView rotates symbols counterclockwise from East (90 degrees) while azimuths are determined clockwise from North (0 degrees).	415
LABEL	6	String	Opening type + opening number without leading zeros.	HO1
POLY	3	String	Is there an associated polygon perimeter for this feature? Y / N	N

PROJPOLY.SHP (polygon)
Aerial extent of mine features with diameters of greater than approximately 50 feet.

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
TAGNUM	18	String	Unique identifier for each opening. Quadrant number + township + range + section + opening type + opening number	4230232PI001
OPENTYPE	5	String	Two-letter code indicating type of mine opening. See codes in Appendix C-B.	PI
LABEL	6	String	Opening type + opening number (without leading zeros) Example HO2	PI1
ACRES	16	Number	Polygon acreage	2.1

PROJROADS.SHP (line)
Access routes to hazardous mine features that do not already exist in a digital format in the 1:24,000 scale roads and trails dataset (GISstate\SGID\st024\trrds.shp).

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
TYPE	10	String	Access type code. This field should describe the access route as it stands without any	XC

			improvements. See codes in Appendix C-B.	

PROJSHEETS.SHP (polygon)
Aerial extent of each map sheet.

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
SHEETNUM	16	String	Map sheet reference number.	3R
TYPE	3	String	E / R, where E denotes engineering maps and R denotes realty maps.	R
LABEL	25	String	Map sheet label as it appears on title block.	Sheet 1E of 8E

PROJOWNERSHIP.SHP (polygon)
Aerial extent of each claim and private parcel in the project area.

FIELDNAME	FIELD LENGTH	FIELD TYPE	FIELD DESCRIPTION	EXAMPLE
CLAIM_NAME	26	String	Name of claim	Copper King
LAND_NUM	26	String	MS, Lot, UMC or Parcel number	MS5128
OWNER_NUM	3	Number	Sequential number assigned to facilitate cross referencing	1
OWNER_NAME	36	String	Name of owner	John D. Stevenson, Joint Trust

APPENDIX E: DIRECTORY STRUCTURE

CONSULTANT shall organize a final data CD containing all digital format deliverables in the manner listed below. Folder names are in **bold** type and file names are in *italics*. All instances of "*Proj*" or "*Project*" shall be replaced with the actual project name (e.g., Southport.apr).

Project.apr
Template.def
UOGMlogo.tif
Engineering
- *InventoryForm2002.pub*
- *ProjCostEstimate.doc*
- *ProjReport.doc*
- *ProjSummary.xls*
- **BidPackage**
  - *ClosureDrawings.pdf*
  - *ProjSpecs.doc*

GISproj
- *ProjBound.avl*
- *ProjBound.shp*
- *ProjMines.avl*
- *ProjMines.shp*
- *ProjOwnership.avl*
- *ProjOwnership.shp*
- *ProjPoly.avl*
- *ProjPoly.shp*
- *ProjRoads.avl*
- *ProjRoads.shp*
- *ProjSheets.avl*
- *ProjSheets.shp*
- **examples**

GISstate
- **DOQ**
- **quad100C**
- **quads**
  - ***q1c***
- **SGID**
  - **qd024**
    - ***q1111***
  - **st024**
  - **st100**
  - **st500**

GPS
- *Proj.ddf*
- **Corrected**
- **Uncorrected**

Maps
- *ProjMaps.pdf*
- **examples**

Photos
- **AMR045912**

Realty
- *ProjOwnership.xls*
- **example**